ENVIRONMENTAL ASSESSMENT
Runway 5L-23R Reconstruction Program at McGhee Tyson Airport

January 2014

DRAFT

METROPOLITAN KNOXVILLE AIRPORT AUTHORITY

Baker

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Chapter 1

Purpose and Need

CHAPTER 1: PURPOSE AND NEED

1.1 INTRODUCTION

The proposed project involves airfield improvements at McGhee Tyson Airport (Airport), which is also known by the Federal Aviation Administration (FAA) identifier TYS. The Airport is located approximately 12 miles south of Knoxville in Alcoa, Blount County, Tennessee (refer to Figure 1-1). TYS is located off Alcoa Highway (TN 115, U.S. Route 129) and can be accessed from I-40 using I-140 (Pellissippi Parkway) and Alcoa Highway.

TYS is one of six commercial service airports in Tennessee.

As one of six airports providing commercial airline service in Tennessee, TYS enplanes the 3rd largest number of passengers (804,917 enplanements) within the state[1] and currently has six airlines providing approximately 130 daily flights, or over 7,000 daily seats, to 19 non-stop destinations.[2] TYS is designated in the FAA's National Plan of Integrated Airport Systems (NPIAS) 2013-2017 report as a Small-hub, Primary Commercial Service Airport.[3]

TYS currently supports over 100,000 annual operations,[4] and major Airport users include commercial airlines, as well as general aviation, air cargo, and military aircraft. The FAA Terminal Area Forecast[5] projects that operations at TYS will experience an average annual increase of approximately 1.1 percent between 2012 and 2035, with enplanements forecast to grow 2.9 percent annually over that same time period. Based on these FAA projections, activity levels at TYS are anticipated to reach 132,106 operations and 1,478,964 enplanements by 2035.

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[1]FAA, National Plan of Integrated Airport Systems (NPIAS) 2013-2017, Appendix A, p. A-96, http://www.faa.gov/airports/planning_capacity/npias/reports/media/2013/npias2013AppendixA.pdf (March 6, 2013).

[2]Accounting and Finance Department of Metropolitan Knoxville Airport Authority, 2012 Comprehensive Annual Financial Report, p.11.

[3] McGhee Tyson Airport, "Departures," http://flyknoxville.com/fids/fids.asp?sort=scheduled_time&sortorder=asc&adi=D (August 26, 2013).

[4]FAA, "APO Terminal Area Forecast for TYS," January 2013, https://aspm.faa.gov/wtaf/detail.asp?line=SELECT+*+FROM+WTAF+WHERE+SYSYEAR>^2010+AND+SYSYEAR<^2040+AND+(LOC_ID^~TYS~) (March 6, 2013).

[5]*Ibid*.

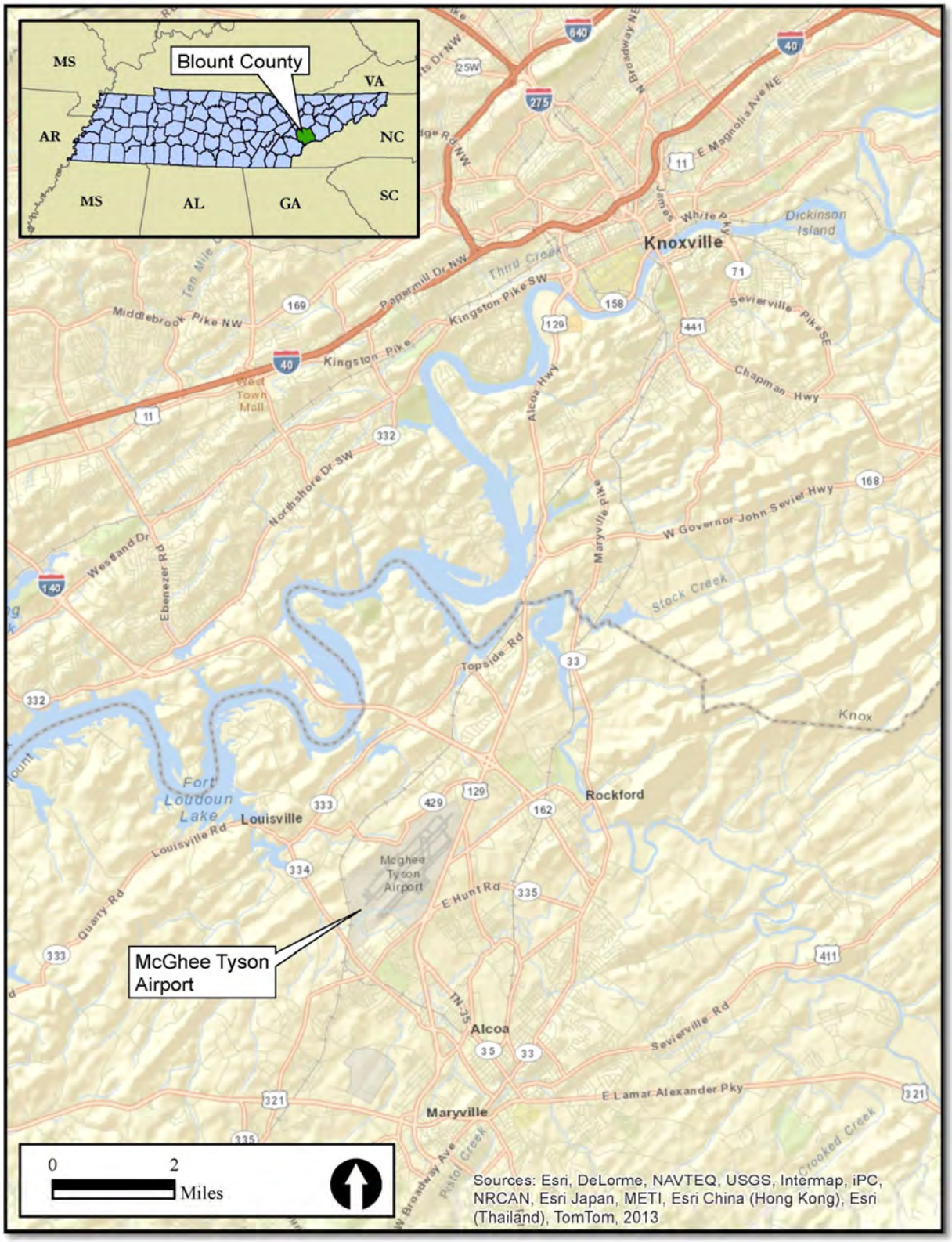


Figure 1-1: Project Location

1.1.1 Existing Facilities

TYS originally opened in 1927 on a 60-acre tract in West Knoxville and was moved to its current site in 1935. This public airport is owned and operated by the Metropolitan Knoxville Airport Authority (MKAA), which is an independent nonprofit agency that was established in 1978.

The Airport is a towered facility comprised of two parallel runways on approximately 2,680 acres of property owned by the MKAA (refer to Figure 1-2). The physical boundaries for the Airport include the CSX Railroad and Louisville Road to the west, Airbase Road, Callahan Road, and Wrights Ferry Road to the north, Alcoa Highway to the east, and West Hunt Road to the south.

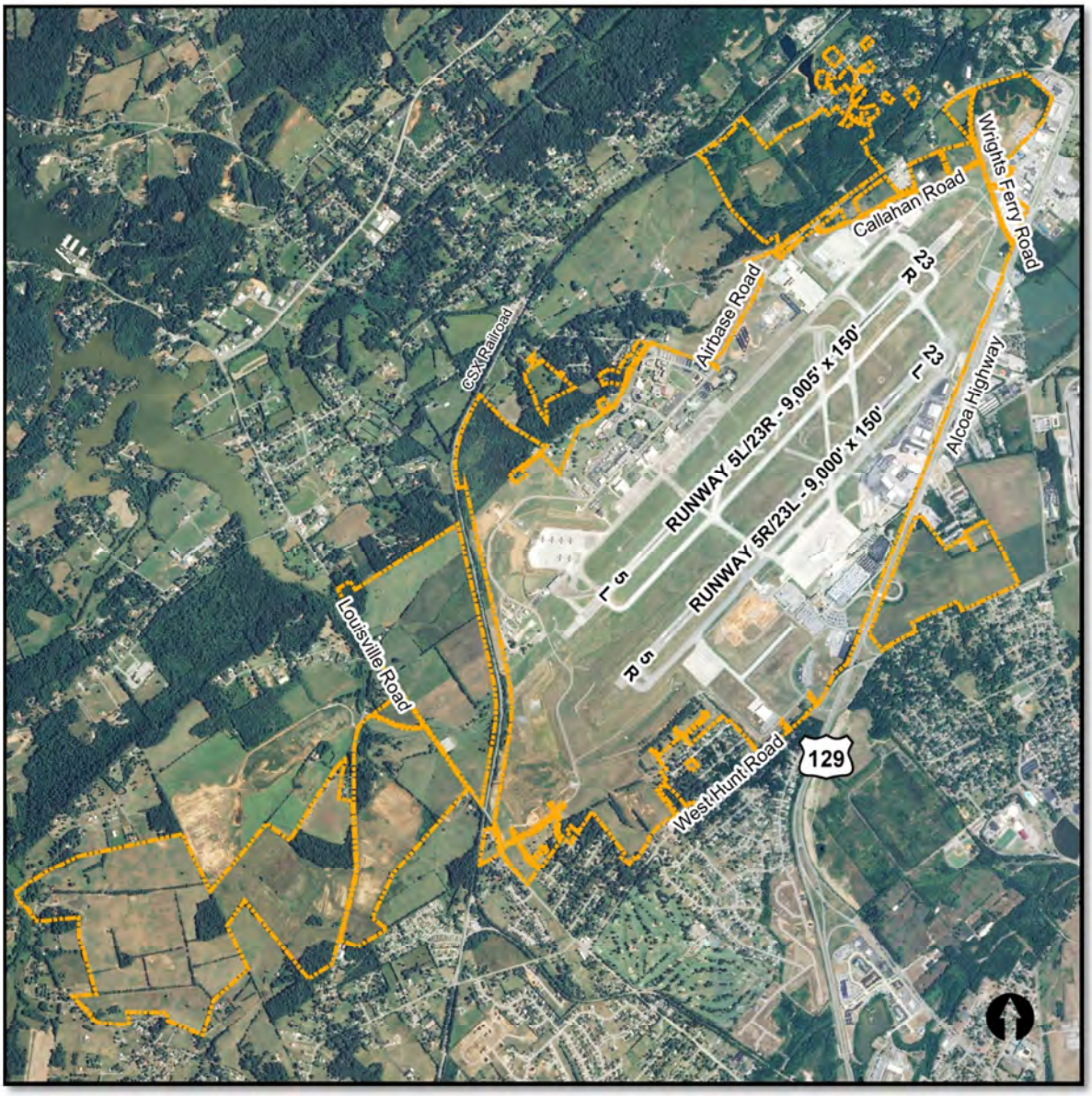


Figure 1-2: Airport Property

1.1.1.A Airside Facilities

The northernmost runway, Runway 5L-23R, is 9,005 feet long and 150 feet wide with a full parallel taxiway (Taxiway B) located to the southeast and Instrument Landing System (ILS) approaches on both runway ends. The Tennessee Air National Guard (TNANG) and air cargo facilities are located north of Runway 5L-23R and military and air cargo aircraft predominantly use this runway. Runway 5R-23L is 9,000 feet long and 150 feet wide with a 400-foot displaced threshold on the northeast (Runway 23L) end and a full parallel taxiway (Taxiway A) located to the southeast. The terminal/commercial carrier apron and the general aviation (GA) apron are located south of Runway 5R-23L, and commercial and general aviation aircraft predominantly use this runway in non-ILS conditions.

Runway 5L-23R is constructed of concrete with a load-bearing capacity of 90,000 pounds for single-wheel aircraft, 200,000 pounds for dual-wheel aircraft, 350,000 pounds for dual-tandem wheels, and 540,000 pounds for double dual-tandem wheels.[6] Runway 5R-23L is constructed of asphalt with a load-bearing capacity of 75,000 pounds for single-wheel aircraft, 200,000 pounds for dual-wheel aircraft, and 270,000 pounds for dual-tandem wheels.[7] Both runways are supported by full-parallel taxiways of comparable weight bearing capacity that provide runway access via several connector taxiways (refer to Figure 1-3).

Existing NAVAIDS include these light towers for the approach lighting system to Runway 5L.

Table 1.1 provides a summary of the existing runway dimensions, lighting, and navigational aids (NAVAIDS). As mentioned above, the passenger terminal and GA apron areas are located on the southeast side of the airfield. The GA apron is used by the Airport's Fixed Based Operator (FBO), TAC Air. The FBO provides support equipment, flight planning areas, ground transportation, and aircraft maintenance to those using the Airport. Several apron areas are also located northwest of the airfield, including the Continental Express Apron, Cargo Apron Area, helicopter parking, and several Tennessee Air National Guard (TNANG) Apron Areas (refer to Figure 1-3).

[6] Wilbur Smith Associates, McGhee Tyson Airport Master Plan, adopted November 15, 2006, Table 1.4, p. 1-12.
[7] *Ibid.*

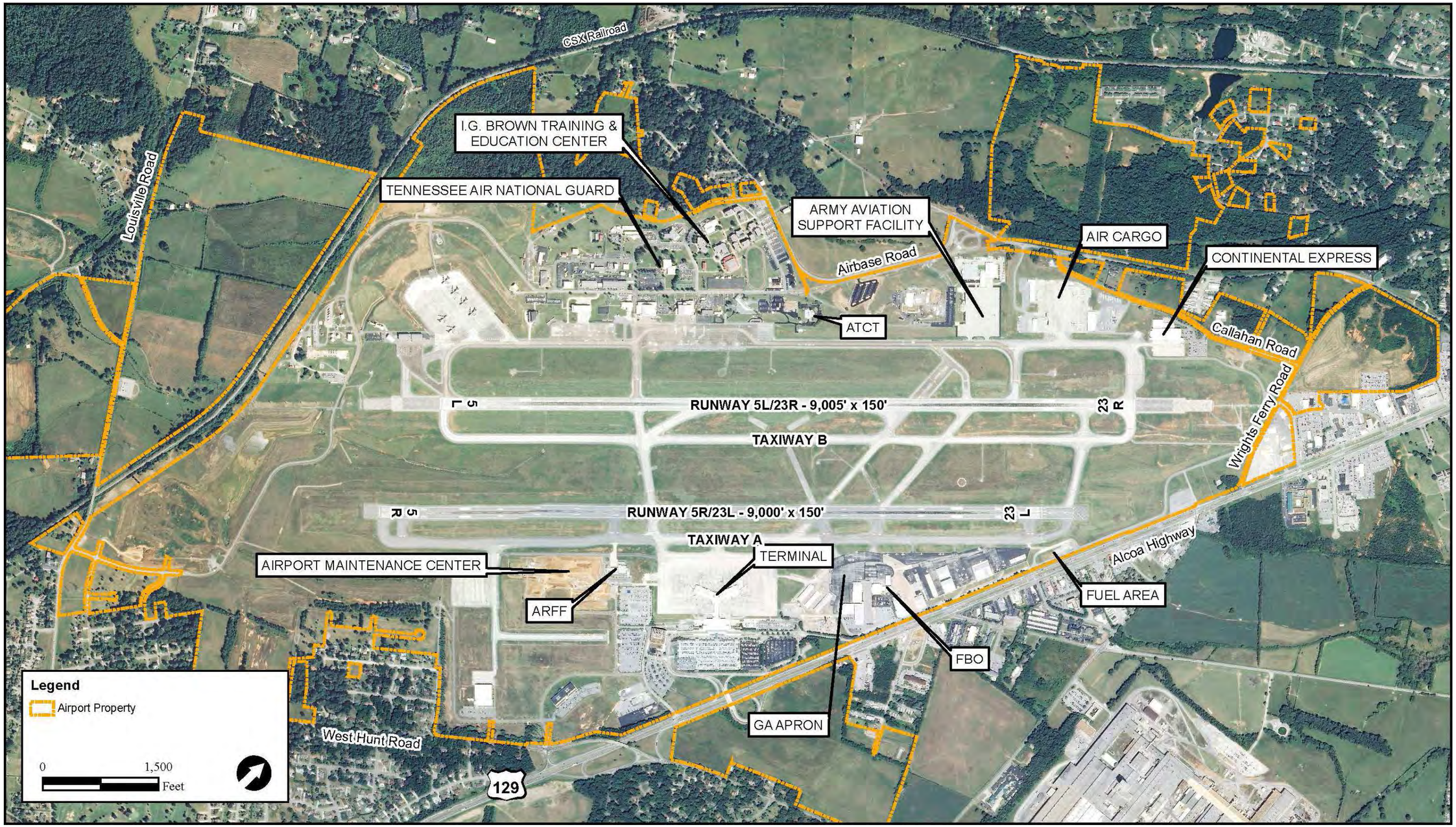


Figure 1-3: Existing Facilities

Table 1.1
Existing Runway Facilities, Lighting, and NAVAIDS

DIMENSION/FACILITY	RUNWAY 5L-23R		RUNWAY 5R-23L	
Length (feet)	9,005		9,000	
Width (feet)	150		150	
Surface	Concrete, grooved		Asphalt, grooved	
Weight Limitation				
Single-wheel	90,000		75,000	
Dual-wheel	200,000		200,000	
Dual-tandem	350,000		270,000	
Double dual-tandem	540,000		n/a	
Runway Edge Lighting	HIRL		HIRL	
Taxiway Lighting	MITL		MITL	
Runway Marking	Precision Instrument		Precision Instrument	
	5L	23R	5R	23L
VASI/PAPI	4-box VASI	4-box VASI	4-light PAPI	4-light PAPI
Approach Lights	MALSR	ALSF-2	None, REILS	None, REILS
Precision Instrument Approach	ILS (Category I)	ILS (Category II)	No	No
GPS Precision Approach	No	No	WAAS/LPV	WAAS/LPV

SOURCES: 2006 McGhee Tyson Airport Master Plan by Wilbur Smith Associates, Tables 1.4 and 1.5, and www.airnav.com, Airport/Facility Directory, South Central U.S. (October 10, 2013).
NOTES: HIRL - High Intensity Runway Lighting; MITL - Medium Intensity Taxiway Lighting; VASI - Visual Approach Path Indicators; PAPI - Precision Approach Path Indicators; MALSR - Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights; ALSF-2 – High Intensity Approach Lighting System with Sequenced Flashing Lights in Category II configuration; REILS – Runway End Identifier Lights; ILS-Instrument Landing System, WAAS/LPV – Wide Area Augmentation System/Localizer Performance with Vertical Guidance.

1.1.1.B Landside Facilities

Landside facilities include the buildings and equipment that support airport operations, such as the passenger terminal, FBOs, hangars, cargo facilities, airport maintenance facility, aircraft rescue and firefighting (ARFF), fuel storage facilities, surface access, and parking facilities (refer to Figure 1-3). The passenger terminal at TYS was constructed in 1974 and renovated in 2000. The renovated terminal is comprised of a 111,700-square foot area for airlines, MKAA administrative offices, concessions, rental cars, and baggage claim; a 16,700-square foot connector for passenger circulation; and, a 130,200-square foot concourse with TSA checkpoint, holdrooms, and 12 gate areas.

The TNANG is located northwest of the airfield on 346 acres of property that is leased from the MKAA. The Army Aviation Support facility is also located in this area between the TNANG and air cargo facilities and bases/operates helicopters at this site. The following units are based at the TNANG:

- 134th Air Refueling Wing – provides air operations and support in response to any call of the military command structure specifically related to mid-air refueling of military aircraft;
- 119th Command and Control Squadron – provides management of space-based assets, such as computer systems, networking, and satellite communications;
- 228th Combat Communications Squadron - provides and sustains emergency command and control communication for U.S. and Allied Forces, as well as disaster relief activities.[8]

It is important to note that several of these missions require continuous access to runway facilities in any weather conditions.

The I.G. Brown Training and Education Center provides several management and leadership training programs for the Air Force and Air National Guard. This facility is unique to the base and generates many visitors due to graduations and other events. Originally formed in support of graduation ceremonies, the 572nd Air Force Band is also located at the base.

The air cargo area, constructed in 1991, is located near the northwest end of the airfield and currently supports operations by Federal Express, United Parcel Service, and DHL Express.

The newest landside facility is the Airport Maintenance Center (AMC), which was completed in August 2013 and provides combined use space for vehicle and equipment maintenance, electrical repair, administrative offices, and snow removal equipment storage. The AMC includes a 65,000-square foot main building that is comprised of vehicle maintenance bays and storage areas, shop areas, administrative offices, break rooms, and training/locker/shower areas. In addition to the main building, a new fueling and wash area, and two tensile membrane (tent) structures for storage of bulk materials are also located at the AMC. The project is Leadership in Energy and Environmental Design (LEED) registered and includes energy efficient systems and pervious pavements.

The new AMC, with two tensile membrane structures on the left and the main building to the right

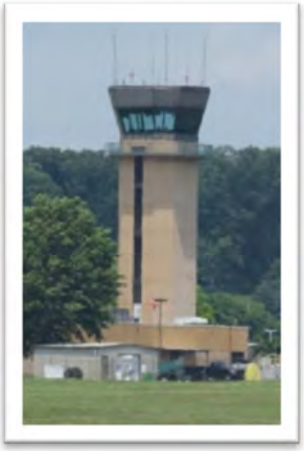
[8] Wilbur Smith Associates, McGhee Tyson Airport Master Plan, adopted November 15, 2006, p. 1-25.

1.1.2 Airspace and Approaches

As described in the 2008 Master Plan Update, the approach, departure, and taxiing of aircraft at TYS is managed by the Airport Traffic Control Tower (ATCT) and the Terminal Radar Approach Control (TRACON). Runway usage is determined based on the weather conditions at the Airport, and when these conditions and activity levels allow, Airport users are typically directed to use the closest runway to minimize taxiing requirements (commercial/GA aircraft on Runway 5R-23L and military/cargo aircraft on Runway 5L-23R).[9]

Weather conditions of less than 1,000-foot cloud base and 3 miles visibility are considered instrument flight rule (IFR) conditions. During these less than optimum weather conditions, arriving commercial, cargo, and military IFR aircraft use the ILS approaches to Runway 5L and Runway 23R. Departures during IFR conditions can be conducted from either end of Runway 5L-23R. Commercial, cargo, and military aircraft require and utilize the traditional ILS. A Global Positioning System (GPS) approach (Wide Area Augmentation System/Localizer Performance with Vertical Guidance-WAAS/LPV) is available on Runway 5R-23L and is used by GA aircraft. The existing NAVAIDS are summarized in Table 1.1.

As shown on Figure 1-3, the ATCT is located off Airbase Road, west of the Airport. The tower, which is located within the secured area with controlled access, contains radar and communications equipment and FAA offices.[10]



Airport Traffic Control Tower (ATCT) at TYS

1.2 PURPOSE OF THIS ENVIRONMENTAL ASSESSMENT

MKAA has undertaken this Environmental Assessment (EA) to fulfill the requirements necessary for compliance with the *National Environmental Policy Act of 1969* (NEPA), FAA Order 1050.1E, Environmental Impacts: Policies and Procedures,[11] and FAA Order 5050.4B, NEPA Implementing Instructions for Airport Actions.[12] As outlined in Order 1050.1E and 5050.4B, proposed actions (airport improvement projects) that require environmental review and approval before implementation can fall within one of three categories:

[9] *Ibid*, p. 1-33.
[10] *Ibid*., p. 1-35.
[11] U.S. Department of Transportation, FAA Order 1050.1E, *Environmental Impacts: Policies and Procedures*, April 28, 2006, Chapters 6,7, and 9.
[12] U.S. Department of Transportation, FAA Order 5050.4B, *NEPA Implementing Instructions for Airport Actions*, April 28, 2006, Chapters 3, 4, and 5.

- Those actions that are normally categorically excluded, such as installation or upgrading of airfield lighting systems other than an approach lighting system serving an instrument landing system;
- Those actions requiring an EA, such as a runway extension project; or,
- Those actions normally requiring an Environmental Impact Statement, such as a new commercial service airport or a new runway to handle air carrier aircraft.

With regards to this project, it has been determined that an EA will be completed to determine if the proposed project, including temporary installation of an ILS, can be implemented in an environmentally acceptable manner.

1.3 PROJECT PURPOSE AND NEED

The purpose of the proposed project is to correct the critical pavement deterioration on Runway 5L-23R in such a way that the runway meets FAA criteria for pavement condition, resolves the existing FAA non-standard design issues, and minimizes operational impacts to the airport during construction/rehabilitation.

The need for the proposed runway improvements was recognized as a result of airfield evaluations that identified deteriorated runway pavement on Runway 5L-23R. In February 2009, MKAA initiated a project to rehabilitate the pavement of Runway 5L-23R, as well as widen the runway's shoulders to 25 feet in accordance with FAA design criteria. The anticipated work items consisted of selective runway slab replacement, new paved shoulders, and an upgrade of the existing edge and centerline lighting system. However, after a detailed pavement survey that identified damaged slabs, as well as an analysis of the design field survey, several unforeseen issues with the runway were identified.

1.3.1 Deteriorated Runway Pavement

The results of the 2009 detailed pavement survey indicated that over 65 percent of the damaged slabs required replacement or repair measures (refer to Figure 1-4); this percentage was much greater than initially estimated.

Deteriorated pavement on Runway 5L-23R

Runway 5L-23R was originally constructed in 1937 at a length of 4,000 feet, extended to 7,500 feet at the on-set of the Korean War in 1951, and extended to its current length of 9,000 feet in 1961. In 1975, the Runway 5L-23R asphalt pavements were replaced with the current Portland cement concrete that exists today. MKAA personnel have indicated that the pavement on Runway 5L-23R is reaching its useful service life. The maintenance cost curve is increasing and the need to close Runway 5L-23R for repairs is occurring more frequently.

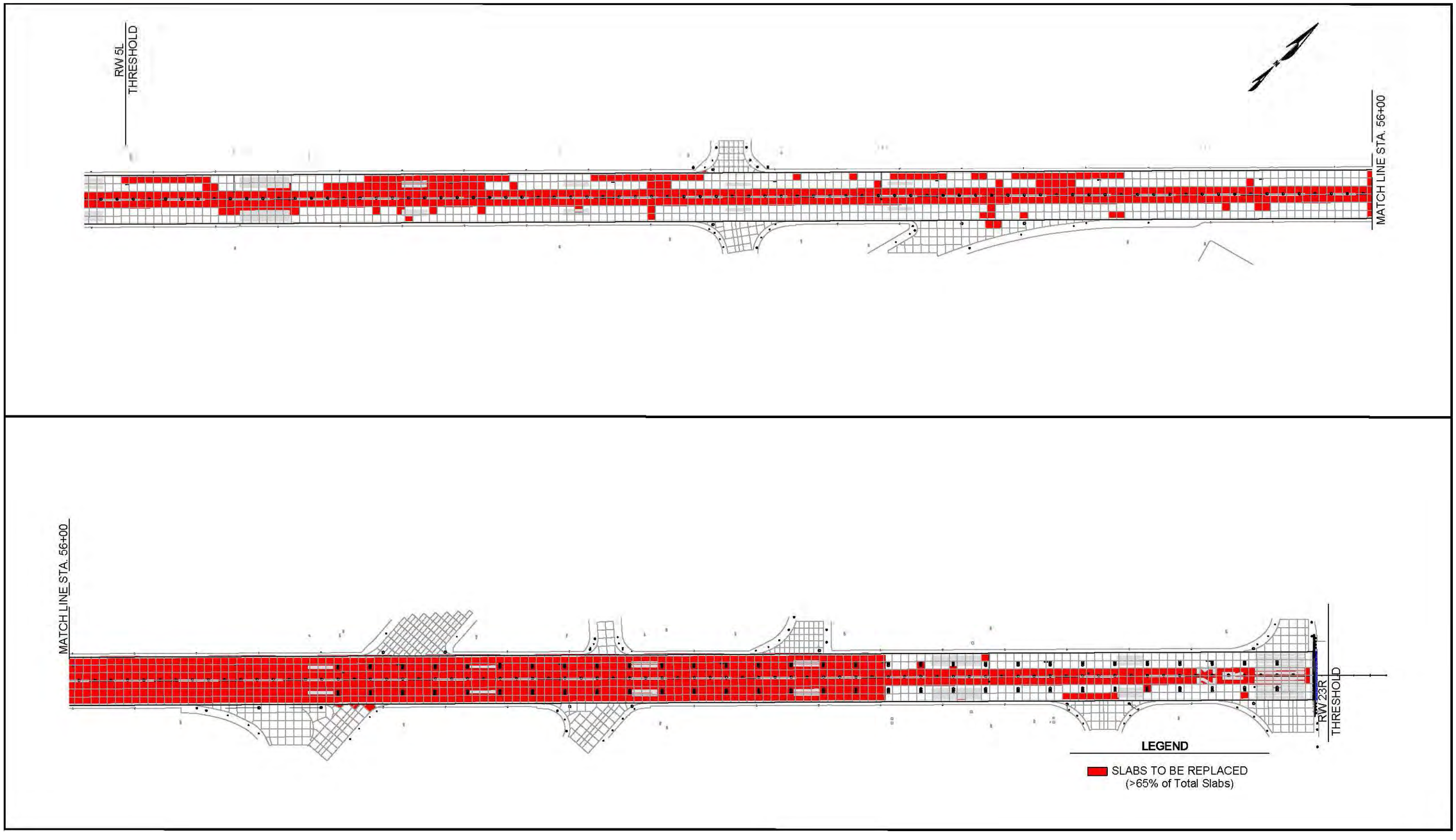


Figure 1-4: Slabs to be Replaced

According to the FAA:

> *Failure to replace deteriorating pavement increases airport maintenance costs and can result in damage to aircraft propellers and engines, pooling of water and ice deposits, and eventually potholes that can damage landing gear. Reconstruction is included in the NPIAS when normal maintenance procedures are no longer economical and effective.*[13]

1.3.1.A Pavement Condition Index Evaluations

TYS has established an ongoing airport pavement management plan that provides the information needed to proactively manage the maintenance and rehabilitation of the pavement infrastructure in the most fiscally responsible manner possible, to anticipate pavement-related funding needs, and to remain in compliance with FAA grant assurances.[14] Identification of both the best repair alternative and the optimal time of repair are critical. "The financial impact of delaying repairs can mean repair expenses 4 to 5 times higher than repair expenses triggered over the first 75 percent of pavement life."[15]

As part of the Airport's pavement management plan, airfield pavements are routinely evaluated using the Pavement Condition Index (PCI). The PCI for airport pavements was originally developed by the United States Army Corps of Engineers (USACE) for the Department of Defense and has been adopted by the FAA. PCI is a numerical rating index between 0 and 100 of the pavement's surface condition, which provides a measure of functional performance.[16] The pavement condition assessment includes the division of airfield pavement into "sections" based first on type of use (i.e. runway, taxiway, or apron), then based on pavement structure, existing condition, or airfield traffic distribution (i.e. the keel, or the center 50- to 75-foot portion of runway, is separated from outer sections due to higher traffic usage).[17] Each airfield section is then further divided into "sample units." A PCI is assessed for each sample unit and then the average PCI for the section is calculated. Table 1.2 describes the PCI rating categories, their associated distress levels, and probable maintenance requirements. Pavements with PCI values above 86 are rated as "Good" and below 10 are rated as "Failed." Satisfactory pavements are considered to be those with a PCI of 71 or higher.

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[13] FAA, *National Plan of Integrated Airport Systems (2011-2015)*, p. 80.
[14] Wilbur Smith Associates, McGhee Tyson Airport Master Plan, adopted November 15, 2006, Executive Summary, p.14.
[15] *Ibid*., p. 14.
[16] ASTM International, D 5340, Standard Test Method for Airport Pavement Condition Index Surveys, p.1.
[17] J. Greene, M. Shahin, and D.R. Alexander, "Airfield Pavement Condition Assessment," printed in Transportation Research Board Record, Volume 1889, TRB, National Research Council, Washington, D.C. 2004, p. 63.

Table 1.2
Pavement Condition Index and Rating Scale

Rating	Definition
86-100	GOOD: Pavement has minor or no distresses and should require only routine maintenance.
71-85	SATISFACTORY: Pavement has scattered low-severity distresses that should require only routine maintenance.
56-70	FAIR: Pavement has a combination of general low- and medium-severity distresses. Near-term maintenance and repair needs may range from routine to major.
41-55	POOR: Pavement has low-, medium-, and high-severity distresses that probably cause some operational problems. Near-term maintenance and repair needs may range from routine up to a requirement for reconstruction.
26-40	VERY POOR: Pavement has predominantly medium- and high-severity distresses that cause considerable maintenance and operational problems. Near-term maintenance and repair needs will be intensive in nature.
11-25	SERIOUS: Pavement has mainly high-severity distresses that cause operational restrictions; immediate repairs are needed.
0-10	FAILED: Pavement deterioration has progressed to the point that safe aircraft operations are no longer possible; complete reconstruction is required.

SOURCE: Department of the Air Force, "Engineering Technical Letter (ETL) 04-9: Pavement Engineering Assessment (EA) Standards," http://www.wbdg.org/ccb/AF/AFETL/etl_04_9.pdf (October 22, 2013).

Table 1.3 provides the PCI results for Runway 5L-23R from 2005, 2008, and 2011. Based on the results of the most recent (2011) pavement evaluation[18] and consistent with the pavement condition depicted on Figure 1-5, the center section of Runway 5L-23R has an overall PCI of 51, which is considered "Poor" and falls below the desired level of 71.

Table 1.3
Pavement Condition Index Results on Runway 5L-23R

Runway Section	YEAR		
	2005	2008	2011
RW 5L-23R Center	71	69	51
RW 5L-23R East	95	83	84
RW 5L-23R West	89	75	73

SOURCE: Applied Research Associates, PCI Evaluation, 2005, 2008, and 2011.

[18] Applied Research Associates, 2011

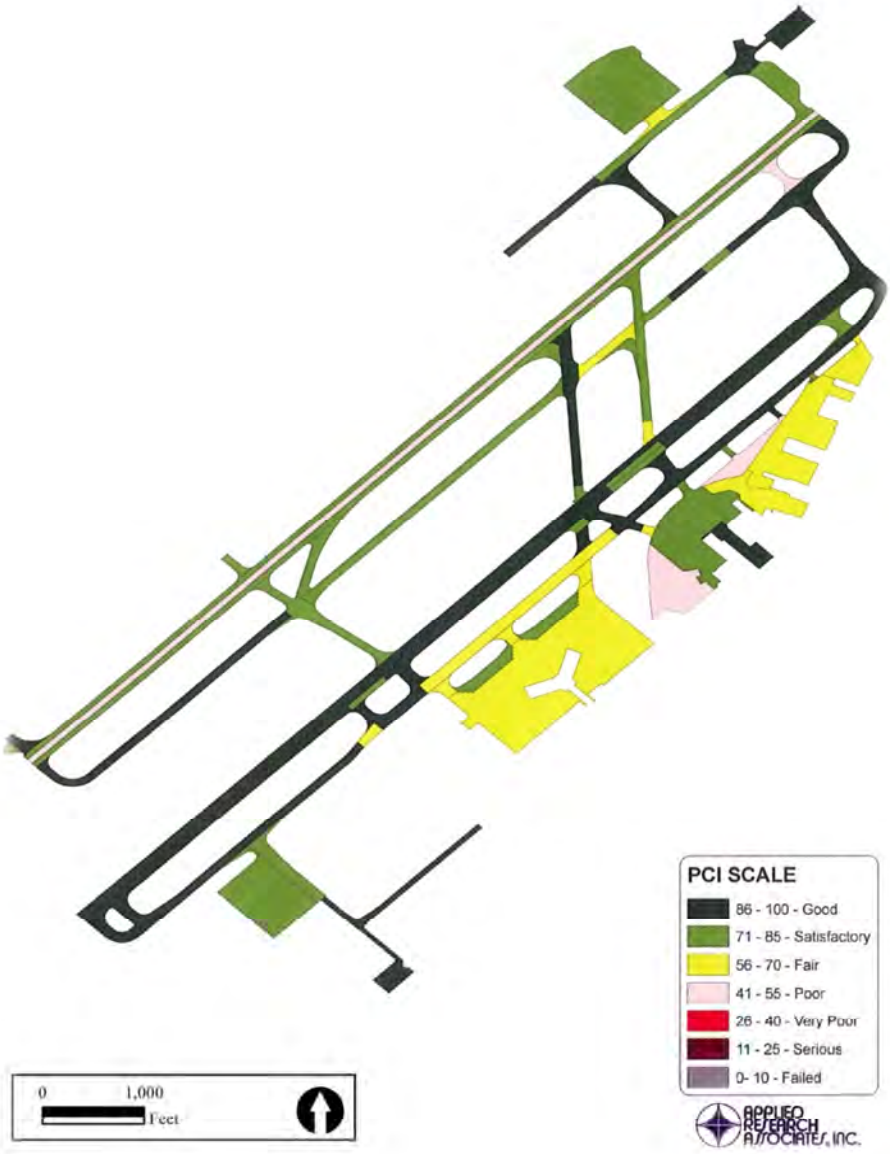

Figure 1-5: 2011 PCI

1.3.2 Inadequate Line of Sight

The 2009 detailed pavement survey also identified longitudinal and cross-slope grades that exceed current FAA requirements (refer to Figure 1-6). This longitudinal grade issue results in inadequate Line of Sight (LOS). When in compliance with FAA guidance contained in Advisory Circular 150/5300-13A, *Airport Design*, LOS allows aircraft pilots the ability to see other aircraft or obstacles within half of the length of runway, five feet above the surface at any location on the runway.[19]

[19] FAA, AC 150/5300-13A, *Airport Design*, September 28, 2012, Paragraph 305.b(2), p. 57.

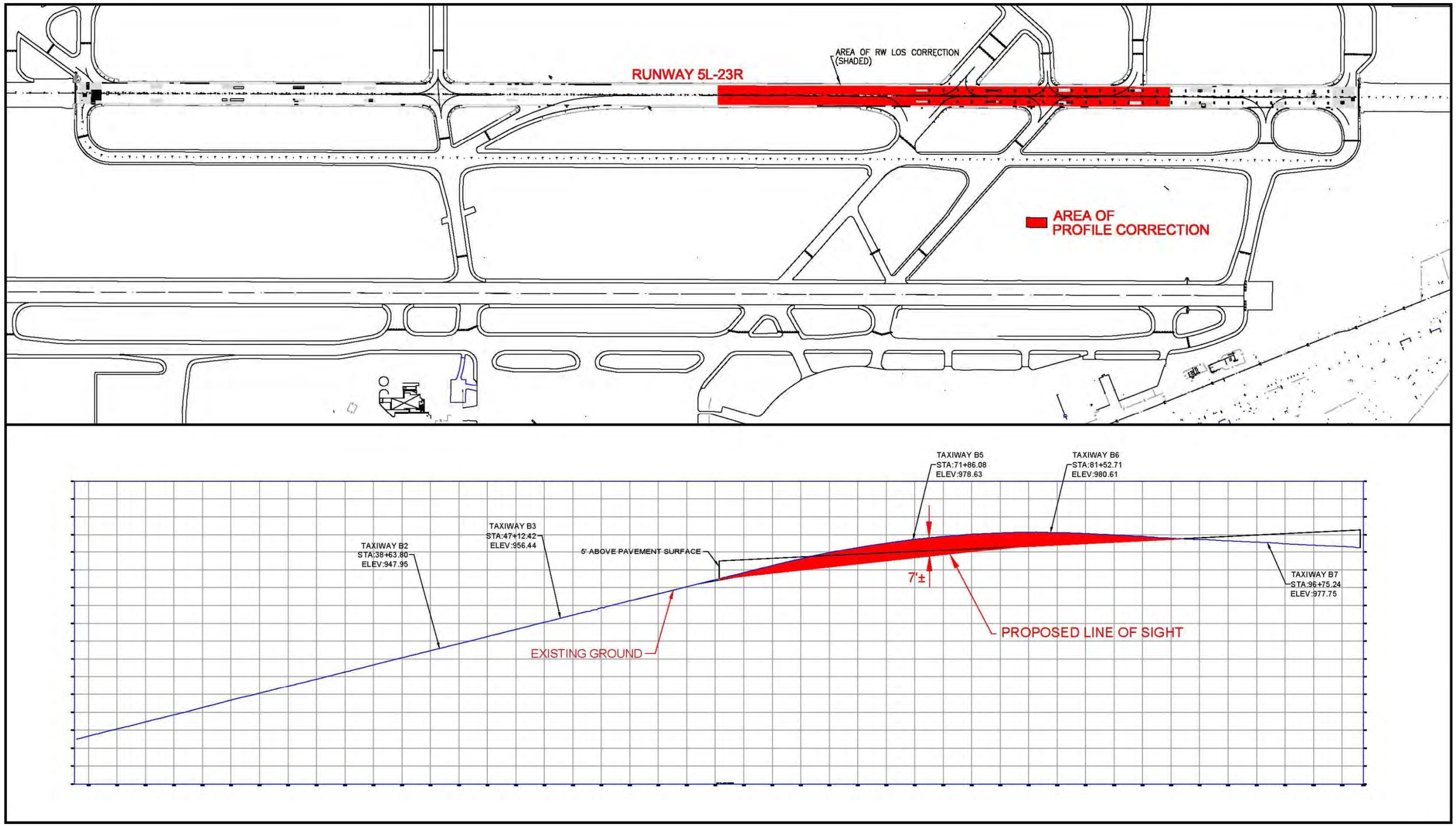

Figure 1-6: Profile Correction for Line of Sight

Advisory Circular 150/5300-13A, paragraph 3 states that the use of these standards is mandatory for airport projects receiving federal grant monies. Accordingly, it is an FAA policy goal that federally obligated airports correct non-standard design conditions, where practicable, when associated projects are initiated. Therefore, correction of the LOS issue during reconstruction of Runway 5L-23R must be considered as part of this airfield improvement program in accordance with FAA policy goals for bringing the airfield into compliance with current design standards.

1.3.3 Stakeholder Input

As part of the planning effort associated with addressing the deteriorating pavement on Runway 5L-23R, a stakeholder group was identified and consulted during the programming phase. As summarized in Appendix A, *Runway Reconstruction – Programming and Development Plan Report*, consultation with these stakeholders allowed the design team to consider potential issues from various operational and customer service perspectives. Stakeholders included: MKAA staff, FAA ATCT, FAA Airports District Office, FAA National Airspace Planning, Tennessee Aeronautics Division, and the TYS Airport Users Group, which was comprised of the TNANG, Commercial Airlines (US Airways, Delta, United, Allegiant, American, AirTran), air cargo (UPS, FedEx), and the general aviation FBO (TAC Air).

Input from these groups included:

- The TNANG indicated an interest in improvements to the existing safety overrun areas, so as to allow for occasional use for takeoffs by a new tanker aircraft that is anticipated to operate at TYS. In addition, a connector taxiway was requested on the Runway 23R end to improve access to this safety overrun area. These improvements would be funded by the TNANG and would improve safety for military operations at TYS by providing additional takeoff distance when conditions necessitate it. The existing runway thresholds and Runway Protections Zones (RPZs) would remain unchanged.
- The FAA has plans to upgrade the existing Approach Lighting System (ALS) on the Runway 23R end with a new ALSF-2 system. Close coordination would be necessary for the scheduling of the ALS upgrade to occur concurrent with the Runway 5L-23R reconstruction, which would minimize the potential for rework in the future and lower the installation cost.
- The Commercial Airline representatives indicated that because their aircraft are unable to fly GPS approaches, the continuity of their operations would be jeopardized during the Runway 5L-23R shutdown, if a functional ILS was not provided on Runway 5R-23L.
- All Air Cargo representatives unanimously indicated their need to have a functional ILS on Runway 5R-23L in order to maintain continuity of their operation during the Runway 5L-23R shutdown.

- TNANG personnel also confirmed that an ILS was essential to maintaining their normal operations and meeting the readiness requirements of their mission.
- FAA ATCT personnel confirmed that operating the airfield from their perspective would be very difficult without a functional ILS. The use of a GPS approach was explored; however, it was determined that a large portion of the TYS fleet mix would be unable to use the GPS-WAAS based approach to precision minimums on existing Runway 5R-23L while the ILS on Runway 5L-23R is shut down for reconstruction.

Based on the input received during several stakeholder meetings (refer to Appendix A) and as described above, the importance of providing ILS capabilities during reconstruction of Runway 5L-23R was established. Two additional components of the proposed project were also identified: 1) pavement and lighting improvements to the existing safety overrun areas on Runway 5L-23R to improve safety during takeoffs by military aircraft; and, 2) upgrade of the existing ALS on the Runway 23R end with a new ALSF-2 system.

1.3.3.A Connected Actions

In accordance with FAA Order 5050.4B, actions that are closely related to the Proposed Action may be considered Connected Actions. Although independent from the Proposed Action, Connected Actions may rely on completion of the proposed project for justification.[20] The proposed improvements/remarking of the existing safety overrun areas on Runway 5L-23R, which would be funded by the TNANG, would improve safety for military operations and enhance the mission of the TNANG. The timing of these proposed improvements is justified by the need to reconstruct Runway 5L-23R and therefore, the safety overrun area improvements are considered a Connected Action and will be evaluated in this EA.

Existing Runway 23R safety overrun

[20] FAA, 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*, Paragraph 905(c)1. p. 9-4.

1.3.3.B Similar Actions

In accordance with FAA Order 5050.4B, actions that "when viewed with other reasonably foreseeable actions, have similarities that provide the basis for their total environmental consequences"[21] are considered similar actions. Based on the similar timing of the FAA's proposed upgrade of the existing ALS on the Runway 23R end with a new ALSF-2 system, this project is considered a Similar Action and will be evaluated in this EA.

1.3.4 Summary

Pavement studies completed in 2005, 2008, and 2011 have documented the decline of pavement conditions at TYS. Based on the results of the most recent pavement study in 2011, the center section of Runway 5L-23R concrete pavement has deteriorated to a PCI value of 51, as compared to a PCI of satisfactory runway pavements being greater than 70. Consistent with these findings, MKAA personnel have indicated that the pavement is reaching its useful life and is becoming a continual maintenance project. Based on recent pavement studies, the pavement requires major rehabilitation/reconstruction in the immediate future.

Having identified the need to improve the Runway 5L-23R pavement, the Airport must also consider resolving the existing FAA airport design issues regarding line of sight. In addition, the proposed improvement of the safety overrun areas on Runway 5L-23R was identified as a Connected Action and the upgrade of FAA's ALS equipment on the Runway 23R end was identified as a Similar Action.

1.4 PROPOSED ACTION ITEMS

Several elements comprise the overall Runway 5L-23R Reconstruction Program, which is the Proposed Action evaluated in this EA and includes:

- Rehabilitation/Reconstruction of Runway 5L-23R;
- Correction of LOS design issue on Runway 5L-23R;
- Widening of Runway 5L-23R shoulders by 15 feet to a total width of 25 feet;
- Improvement of Runway 5L-23R safety overruns - Connected Action (refer to Section 1.3.3.A);
- Upgrade of the existing ALS on the Runway 23R end with a new ALSF-2 system – Similar Action (refer to Section 1.3.3.B); and,
- Pavement maintenance and potential installation of temporary ILS on Runway 5R-23L.

[21] FAA, 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*, Paragraph 905(c)2. p. 9-4.

These improvements would replace deteriorated airfield pavement and would improve airfield operational safety. This is a maintenance-related project that would not increase air traffic or change the aircraft class that currently utilizes the Airport.

1.5 REQUESTED FEDERAL ACTION

The requested federal action is FAA approval of the proposed Runway 5L-23R Reconstruction Program. Associated projects include correction of the LOS design issue, construction of new paved shoulders, safety overrun improvements, and upgrades to the FAA's approach light system. Since the proposal, if approved, may result in federal funding, this EA has been prepared to comply with the requirements of NEPA and other pertinent environmental regulations. It is anticipated that a Finding of No Significant Impact (FONSI) would be granted as a result of this EA.

Chapter 2

Alternatives

CHAPTER 2: ALTERNATIVES

2.1 INTRODUCTION

As required by NEPA and the FAA implementing regulations, orders, and guidance, Chapter 2 evaluates alternatives considered during development of the Proposed Action. The alternatives discussed in this chapter include:

- No-build Alternative;
- Alternatives Considered but Eliminated;
- Reasonable Alternatives; and,
- Preferred Alternative.

FAA Order 1050.1E states that the alternatives evaluated should be discussed in sufficient detail so that the decision maker can show reasons for selecting a Preferred Alternative that meets the Purpose and Need for the proposed project. The various alternatives will be evaluated to the degree appropriate both for the complexity of the proposed project and for the magnitude of their potential impacts.

2.2 ALTERNATIVE DEVELOPMENT AND SCREENING

Potential alternatives were developed based on the proposed project's Purpose and Need, which is to correct the critical pavement deterioration on Runway 5L-23R in such a way that the runway meets FAA criteria for pavement condition and resolves the existing FAA non-standard design issues, and minimizes operational impacts to the airport during construction/rehabilitation.

The potential alternatives that were identified include:

- No-build Alternative;
- Alternative 1 - Selective Slab Replacement and No Correction of LOS Issue;
- Alternative 2 - Reconstruct Runway 5L-23R and Correction of LOS Issue without installation of Temporary ILS;
- Alternative 3 - Reconstruct Runway 5L-23R and Correction of LOS Issue with installation of Temporary ILS;
- Alternative 4 - Reconstruct Runway 5L-23R and Correction of LOS Issue with installation of Temporary ILS, utilizing 24-hour Construction Methods; and,
- Alternative 5 - Construct a New Parallel Runway with ILS, Reconstruct Runway 5L-23R, and Correction of LOS Issue.

Once potential alternatives were identified and determined to meet the project's Purpose and Need, they were assessed and compared based on whether they would be economically feasible (i.e. a matter of sound engineering) and prudent (i.e. based on a balancing of practical concerns). Finally, the potential alternatives were evaluated as to whether they

would minimize the potential impact to the Airport's operations, based on construction time and the provision of an ILS. Table 2.1 provides the results of the screening of potential alternatives. As shown, only Alternative 3 would fully satisfy the Purpose and Need, be economically feasible and prudent, and minimize disruption to Airport operations. This Alternative would reconstruct Runway 5L-23R and install a temporary ILS on Runway 5R-23L to allow for the safest use of this runway for all operations while Runway 5L-23R is closed for reconstruction. This Reasonable Alternative is discussed in Section 2.5 and is the Preferred Alternative (Proposed Action). The other Alternatives that fail to meet the screening criteria are described in Section 2.4 along with more detailed explanations of the reasons they were eliminated.

Table 2.1
Alternatives Screening Matrix

ALTERNATIVE	SCREENING CRITERIA		
	Satisfies Purpose and Need	**Economically Feasible/ Prudent**	**Minimizes Operational Impacts (Construction Time; ILS)**
No-build Alternative	No	No/No	Yes (0 months; ILS)
Alternative 1 - Selective Slab Replacement and No Correction of LOS Issue	No	Yes/No	Yes (6 months; ILS)
Alternative 2 - Reconstruct Runway 5L-23R and Correction of LOS Issue without installation of Temporary ILS	No	Yes/No	No (14 months; No ILS)
Alternative 3 - Reconstruct Runway 5L-23R and Correction of LOS Issue with installation of Temporary ILS	**Yes**	**Yes/Yes**	**Yes (20 months; ILS)[a]**
Alternative 4 - Reconstruct Runway 5L-23R and Correction of LOS Issue with installation of Temporary ILS, utilizing 24-hour Construction Methods	Yes	No/No	Yes (9 months; ILS)[b]
Alternative 5 - Construct a New Parallel Runway with ILS, Reconstruct Runway 5L-23R, and Correction of LOS Issue	Yes	No/No	No (36-40 months; ILS)

SOURCE: Michael Baker Jr., Inc., October 2013.
[a] Equals 14 months for RW 5L-23R Reconstruction, plus 6 months for ILS installation
[b] Equals 3 months for RW 5L-23R Reconstruction, plus 6 months for ILS installation

2.3 NO-BUILD ALTERNATIVE

Under the requirements of NEPA, the range of alternatives considered must include the No-build Alternative. The No-build Alternative describes the existing conditions at the Airport

and provides a baseline for comparing the Reasonable Alternatives in terms of fulfilling the Purpose and Need of the proposed project and impacts to resources within and in the vicinity of the project area.

Under the No-build Alternative, the project area would remain in its current condition and potential environmental impacts would not occur; however, this alternative would not satisfy the project Purpose and Need, nor would it be considered economically feasible or prudent. With the No-build Alternative, Runway 5L-23R would not be rehabilitated or reconstructed, which would eventually jeopardize MKAA's ability to provide the necessary runway capabilities to existing airport operators at TYS. Continued aircraft operations on the deteriorated Runway 5L-23R pavement would result in continually increasing maintenance costs, frequency of repairs, and potential damage to aircraft. Not addressing the deteriorating pavement on Runway 5L-23R would eventually impact the ability of the TNANG units operating at TYS to fulfill their missions and could also result in loss of service by commercial and air cargo carriers. In addition, there is a line of sight design issue with Runway 5L-23R that would remain under the No-build Alternative.

If the pavement for Runway 5L-23R becomes deteriorated to the point that it is unsafe, the runway could be shut down permanently and all operations would have to shift to Runway 5R-23L. While Runway 5R-23L is 9,000 feet in length and capable of handling the aircraft operating at TYS, it lacks a precision instrument approach system that can be used by commercial, air cargo, and military aircraft in poor visibility conditions. In addition, activity levels at TYS require the use of two runways for airfield capacity, as well as to provide redundancy for the military, air cargo and commercial operations.

2.4 ALTERNATIVES CONSIDERED BUT ELIMINATED

2.4.1 Alternative 1 – Selective Slab Replacement and No Correction of LOS Issue

Alternative 1 represents the pavement project that was originally anticipated for Runway 5L-23R. At the outset of the pavement study, it was initially assumed that approximately 15 to 25 percent of the pavement slabs that compose Runway 5L-23R would require replacement. However, during the detailed 2009 pavement survey, it was found that 65 percent of the pavement slabs would need replacing. Alternative 1 would allow for selective slab replacement and widening of the exisiting runway shoulders from 10 feet to 25 feet wide. The estimated construction time for Alternative 1 is approximately 6 months. A permanent shutdown of Runway 5L-23R would not be needed under Alternative 1. However, the use of pre-fabricated slabs and a combination of temporary daytime and nighttime closures may be needed to replace the deteriorated pavement, which would affect runway operations.

Although Alternative 1 could be accomplished with less impact to airfield operations during construction, it would not correct the LOS issue associated with Runway 5L-23R. As discussed in Chapter 1, it is an FAA policy goal that federally obligated airports correct non-standard design conditions, where practicable, when associated projects are

initiated. The line of sight issue could not be corrected through temporary daytime/nighttime closures of Runway 5L-23R due to the earthwork and grading involved. Therefore, the Purpose and Need of the proposed project could not be satisfied with Alternative 1, and it was eliminated from further consideration.

In addition, based on the results of the 2009 detailed pavement survey, over 65 percent of the concrete slabs need to be replaced. The selective slab replacement would result in a "patchwork" solution (i.e. 2/3 new slabs, 1/3 old) of Runway 5L-23R. While it would be less costly initially, continual replacement and maintenance would be needed to maintain the runway in satisfactory condition. That would result in greater overall costs and a long-term impact to airfield operations due to continual runway closures for slab replacement/maintenance. As a result, Alternative 1 would be economically feasible but not prudent.

2.4.2 Alternative 2 – Reconstruct Runway 5L-23R and Correction of LOS Issue without installation of Temporary ILS

Phased improvements to be completed under Alternative 2 include the initial closure of Runway 5R-23L for minor crack sealing and maintenance. Once these improvements were made to Runway 5R-23L, all aircraft operations would be shifted to this runway. Runway 5L-23R would be closed for approximately 14 months for reconstruction and earthwork/grading to correct the LOS issue, airfield lighting improvements, and widening of the runway shoulders. Although Alternative 2 would address the LOS issue and avoid the need for continual slab replacement, this alternative would not include the construction of an ILS. As discussed in Section 1.3.3, input received during several stakeholder meetings indicated that availability of ILS capabilities during reconstruction of Runway 5L-23R was critical to: 1) maintaining normal operations and meeting the readiness requirements of the TNANG's mission; 2) air cargo operators in order to maintain continuity of their operation; and, 3) FAA ATCT personnel for operation of the airfield. Based on this stakeholder input, absence of a temporary ILS on Runway 5R-23L would result in unacceptable operational impacts during construction. Therefore, Alternative 2 fails to meet the Purpose and Need of the project and was eliminated from further consideration.

2.4.3 Alternative 4 – Reconstruct Runway 5L-23R and Correction of LOS Issue with installation of Temporary ILS, utilizing 24-hour Construction Methods

Like Alternative 2, phased improvements to be completed under Alternative 4 include the initial closure of Runway 5R-23L for minor crack sealing and maintenance. However, Alternative 4 also includes installation of a temporary ILS. Once the minor crack sealing improvements were made to Runway 5R-23L and the temporary ILS was installed (approximately 6 months), all aircraft operations would be shifted to this runway. Under Alternative 4, in an order to minimize the duration of reconstruction of Runway 5L-23R, the contractor would expedite the project by implementing a 24-hour construction schedule. Under this expedited schedule it is anticipated that the reconstruction and

earthwork/grading to correct the LOS issue, airfield lighting improvements, and widening of the runway shoulders could be completed in approximately 3 months. Alternative 4 would address the LOS issue, provide for efficient runway reconstruction, and would provide for the safest airfield operations during construction by the establishment of a temporary ILS approach to Runway 5R-23L.

Review of runway construction projects at other airports that have been completed using implementation of a 24-hour construction schedule indicated that although the Proposed Action could be completed in a much shorter time (9 months total), the cost could be approximately double. It was recognized that due to the substantial cost, these expedited construction methods were feasible only at much larger airports. In addition, due to the location of the military and air cargo operators north of Runway 5L-23R, 24-hour construction activities on this runway could result in some operational impacts with regards to aircraft gaining access to Runway 5R-23L. Therefore, although Alternative 4 meets the Purpose and Need of the proposed project and would provide the ILS capabilities that are required by airport users, it would not be economically feasible or prudent and was eliminated from further consideration.

2.4.4 Alternative 5 – Construct a New Parallel Runway with ILS

With Alternative 5, the reconstruction of Runway 5L-23R, widening of the exisiting runway shoulders, upgrade of the existing edge and centerline lighting system, and correction of the LOS issue would be accomplished by first constructing a new parallel runway to the northwest of the existing airfield, consistent with the current Airport Layout Plan. This third runway would provide ILS approach capabilities to airport users, as the existing precision approach at TYS would be unavailable during the closure of Runway 5L-23R for reconstruction. Although this alternative would provide the ILS capabilities that are required by airport users (as indicated during the numerous stakeholder meetings) it would not be economically feasible. In addition, as indicated in the 2006 Master Plan Update, construction of a third runway at TYS is highly uncertain and would not be needed for airfield capacity until beyond the 20-year planning period. Therefore, while Alternative 5 would satisfy the Purpose and Need for the proposed project, it is not economically feasible/prudent or justified, and therefore was eliminated from further consideration.

2.5 REASONABLE ALTERNATIVES

2.5.1 Alternative 3 - Reconstruct Runway 5L-23R and Correction of LOS Issue with Temporary ILS installed on Runway 5R-23L

Phased improvements to be completed under Alternative 3 include the initial closure of Runway 5R-23L for minor crack sealing and maintenance, as well as installation of a temporary ILS. Once these improvements were made to Runway 5R-23L (approximately 6 months), all aircraft operations would be shifted to this runway. Runway 5L-23R would be closed for more than one year for reconstruction and earthwork/grading to

correct the LOS issue, airfield lighting improvements, and widening of the runway shoulders. Alternative 3 would address the LOS issue, avoid the patchwork solution to slab replacement (which would minimize future closure of the runway for maintenance), and would provide for the safest airfield operations during construction by the establishment of a temporary ILS approach to Runway 5R-23L.

Alternative 3 meets the Purpose and Need of the proposed project by addressing the deteriorated runway pavements and correcting the LOS issue and runway shoulder width in accordance with FAA guidance; provides the most overall economically prudent approach to pavement management at TYS; and, would minimize construction time by avoiding the future maintenance necessary under Alternative 1 and by being completed in approximately half the time of the new runway construction under Alternative 5.

2.6 IDENTIFICATION OF PREFERRED ALTERNATIVE

Alternative 3 - Reconstruct Runway 5L-23R and Correction of LOS Issue with Temporary ILS installed on Runway 5R-23L, has been identified as the Preferred Alternative and is depicted in Figure 2-1. Evaluation of the various improvement alternatives indicates that the total reconstruction of Runway 5L-23R under Alternative 3 supports revitalization of the airfield and provides several benefits, including:

- Avoidance of a "patchwork" solution (2/3 new slabs, 1/3 old slabs);
- Correction of the LOS issue;
- Improvement of runway area sub-grade and installation of a stabilized base;
- Installation of an under-drain system; and,
- Replacement of existing lighting systems (including HIRL, Touch Down Zone [TDZ], runway centerline and threshold lights).

2.6.1 ILS Location Alternatives

The TNANG missions and the flight schedules of commercial airlines and air cargo operators are very time critical. Therefore, in order to maintain the current high level of operational capability and reliability of the airfield during closure of Runway 5L-23R for reconstruction, stakeholder input indicated that it would be necessary to improve the instrument approach capability to Runway 5R or Runway 23L through the establishment of Category (CAT) I ILS procedures. The ILS allows aircraft to operate during poor visibility conditions, such as fog, which can occur at TYS during summer mornings when there is a high volume of inbound and outbound traffic. Based on input from the FAA,[1] ILS events normally account for approximately 3 percent of an airport's activity; however, at TYS they account for approximately 9 percent of overall operations.

[1] Refer to July 27, 2010, Joint Planning Conference minutes in Appendix A.

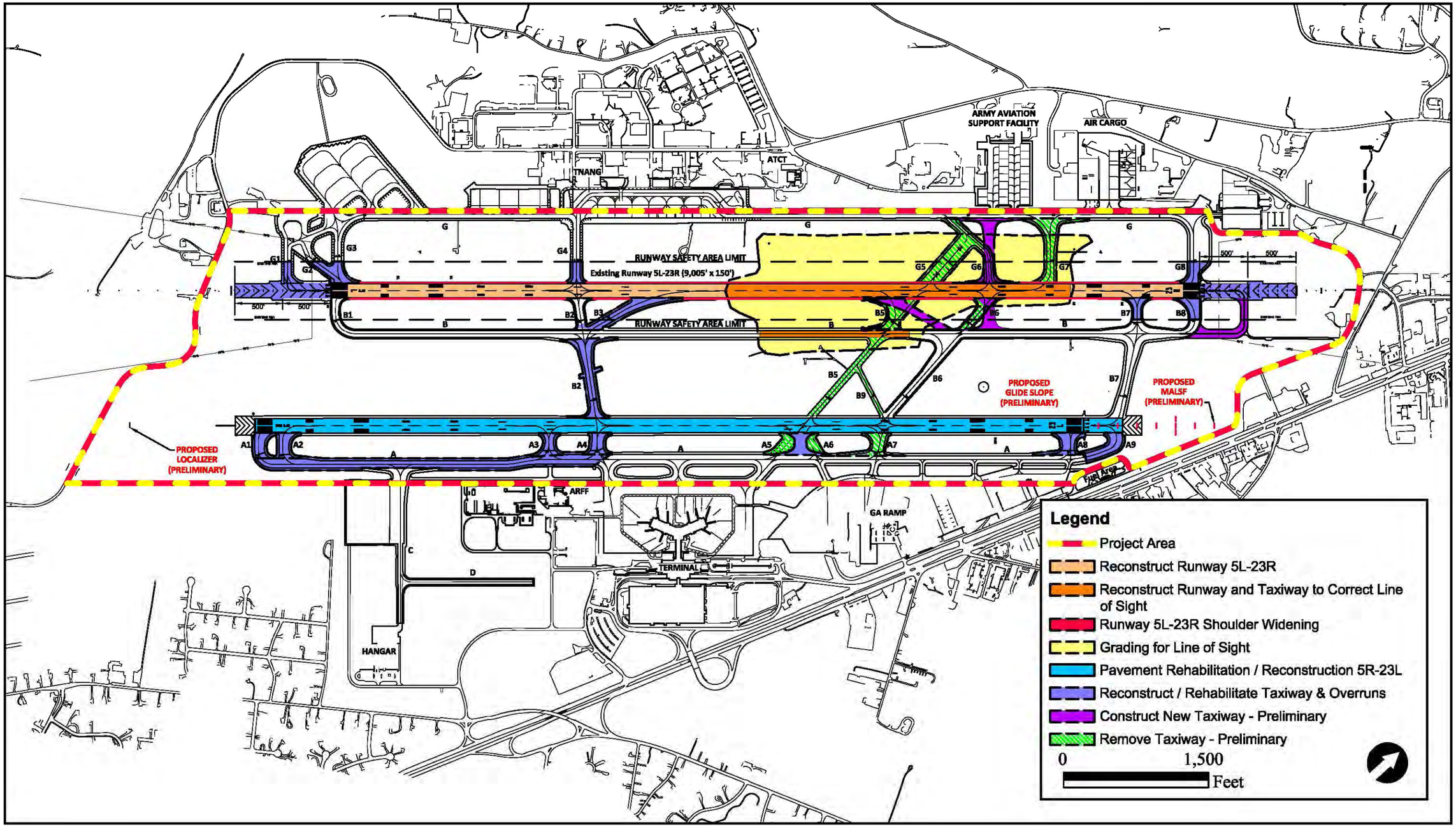

Figure 2-1: Preferred Alternative

To evaluate ILS operational capabilities, a Terminal Instrument Procedures (TERPS) analysis was conducted (refer to July 20, 2102, TERPS Feasibility Analysis in Appendix A). This is a study of potential penetrations within the runway approaches based on available mapping and data. The results of the TERPS Analyses indicate that CAT I ILS procedures could be established and result in approach minimums to each end of Runway 5R-23L that are slightly above the lowest minimums that can be authorized under ideal conditions.

It was noted during the TERPS analysis that the separation between Runway 5R-23L and parallel Taxiway A is less than the FAA design standard of 400 feet (centerline to centerline). As a result, taxiing aircraft would need to be restricted from operating on the non-standard portions of Taxiway A when CAT I ILS arrivals are underway.

Although further coordination with the FAA would be conducted during final procedure design and flight check of the ILS, the Proposed Action identifies establishment of the ILS on the approach to Runway 23L, with the glideslope located west of the Runway 23L end and the new localizer located southwest of the Runway 5R end.

2.6.2 Taxiway Modification Alternatives

Modifications to the existing taxiway system at TYS were proposed both as a result of the earth work that would be required to correct the LOS issue, and in response to information gathered during the stakeholder meetings. A taxiway exit analysis was prepared and is included in Appendix A. Through an iterative process, a proposed airfield taxiway layout plan was formulated. Although the taxiway system is still under review and the layout depicted on Figure 2-1 is considered preliminary, proposed taxiway modifications include:

- *New Connector Taxiway* – One particular "hot spot" cited by FAA ATCT personnel during stakeholder coordination was that of the intersection of parallel Taxiway A with Taxiways A5, A6 and A7 (west of the FBO and GA apron area, refer to Figure 2-1). To increase safety, it was recommended to demolish these three connectors and replace them with a new 90 degree Taxiway in the same area.

- *New Taxiways near Runway 23L Threshold* – As a safety measure to prevent runway crossings within the middle 1/3 of Runway 5L-23R, elimination of Taxiways B5, B6 and B9 (in the vicinity of the area to be graded for the LOS issue, refer to Figure 2-1) and construct a new 90 degree taxiway that would connect Taxiway G7 to parallel Taxiway B. This would eliminate runway crossing in the middle 1/3 of Runway 5R-23L, as well as remedy the taxiway convergence issue in the Taxiway B/B6 area.

One concern discussed during the stakeholder coordination meetings was the existing connector taxiways and airfield access for the various operators during construction, especially military and air cargo aircraft. Due to the proposed closure of Runway 5L-23R for reconstruction and the extensive earthwork that would be required for correction of the LOS issue, it was appropriate during the initial planning phase to assess the efficiency of the existing taxiway system. ATCT provided information regarding the identification of "hot spots" for runway incursions within the airfield. Based on ATCT information, stakeholder input, and current FAA guidance, the existing airfield taxiway system was evaluated. As a result of this taxiway analysis, reconfiguration of some taxiways, as well as demolition of others was incorporated into the overall proposed project.

The preliminary recommended taxiway modifications are depicted on Figure 2-1 and described in memorandums dated June 10, 2010, and March 2, 2011, that are included in Appendix A. The modifications depicted on Figure 2-1 would optimize aircraft movements with the construction of new mid-field connector taxiways and would reduce overall maintenance costs by removing several of the existing connector taxiways. The addition of mid-field connector taxiways would allow aircraft to exit the runway quicker when landing under dry conditions at 80 percent maximum landing weight. Taxiway removal is proposed primarily in instances of substantial longitudinal grade adjustment that would occur with the Runway 5L-23R reconstruction and due to the potential for runway incursions.

2.7 PROPOSED ACTION

Based on the existing condition of Runway 5L-23R, five Alternatives were developed to correct the identified deterioration of the runway pavement. Along with the No-build Alternative, these five Alternatives were evaluated for their ability to meet the Purpose and Need, as well as if they were economically feasible and minimized impacts to Airport operations during construction. Of the four Alternatives developed, only one (Alternative 3) was identified that would fully satisfy the screening criteria.

Since this is the only Reasonable Alternative, as well as being the Sponsor's Preferred Alternative, it was carried forward as the Proposed Action for further analysis in Chapter 3 of this EA, along with the No-build Alternative. The various components of the Proposed Action to be evaluated in this EA include:

- *Runway 5R-23L Pavement Maintenance* – Crack sealing and patching of the pavement surface over the entire length of Runway 5R-23L would significantly reduce the need for rehabilitation work during the period that Runway 5L-23R would be closed for reconstruction.
- *Installation of ILS on Runway 5R-23L* – In order to sustain the TNANG missions and meet the needs of the commercial and air cargo tenants at TYS as well as the FAA ATCT personnel, temporary installation of ILS on Runway 5R-23L during

reconstruction of Runway 5L-23R must be evaluated. Associated site work would include an access road to equipment and the shelter for both the glideslope and the localizer area.

- *Line of Sight (LOS) Correction* – As shown in Figure 1-6, over 3,000 linear feet of the existing Runway 5L-23R requires a longitudinal profile correction. Adjusting the runway profile to meet FAA LOS criteria would require earth moving activities in excess of 300,000 cubic yards.
- *Connecting Taxiway Reconstruction/Modification* – The LOS correction on Runway 5L-23R also affects the parallel taxiway and several connector taxiways as illustrated in Figure 2-1. Specifically, over 1,500 linear feet of Taxiway B would require reconstruction to meet FAA grading criteria as well as Part 77 requirements. Further, improvements to the taxiway system were evaluated with the preliminary anticipated modifications depicted on Figure 2-1.
- *New Paved Shoulders* – The existing 10-foot wide shoulders on Runway 5L-23R do not meet FAA criteria. As part of this reconstruction project, it is intended to build new paved 25-foot wide shoulders in accordance with FAA guidance.
- *Sub-base Treatment* – Recent projects on neighboring taxiways to Runway 5L-23R have identified unsuitable subgrade conditions; therefore, it likely that additional soil stabilization measures would be needed throughout the entire length of the runway.
- *Grading/Drainage Improvements* – Based on the large area that would need to be re-graded as a result of the LOS correction, some additional drainage improvements would be necessary, such as installation and/or adjustment of drainage structures, new pipe, erosion control measures and large areas of grassing.
- *Connected Action: Safety overrun improvements on RW 5L-23R* – Rehabilitation and remarking of 1,000-foot safety overruns on RW 5L-23R for occasional use by the TNANG.
- *Similar Action: Upgrade of RW 5L-23R ILS and Approach Lighting System* – The FAA has plans to upgrade the existing Approach Lighting System (ALS) on the Runway 23R end with a new ALSF-2 system. Close coordination would be necessary to ensure that the Runway 5L-23R and ALS upgrade occur concurrently.

Construction of the Preferred Alternative would be anticipated to take approximately 20 months to complete. Phase I (2014) would last approximately 6 months and would involve limited closures of Runway 5R-23L to complete crack sealing and patching of the pavement surface and installation of a temporary ILS approach to the Runway 5R end. Phase II (2015) would consist of closure of Runway 5L-23R for reconstruction, extensive earthwork to correct the LOS issue, taxiway construction/demolition, and airfield lighting installation, during which time all aircraft operations would occur on Runway 5R-23L. Phase II is anticipated to take 14 months to complete. Following completion of these airfield improvements, operations would shift back to their typical runway usage (2016), which

includes most military and air cargo operations occurring on Runway 5L-23R and commercial and general aviation operations occurring on Runway 5R-23L.

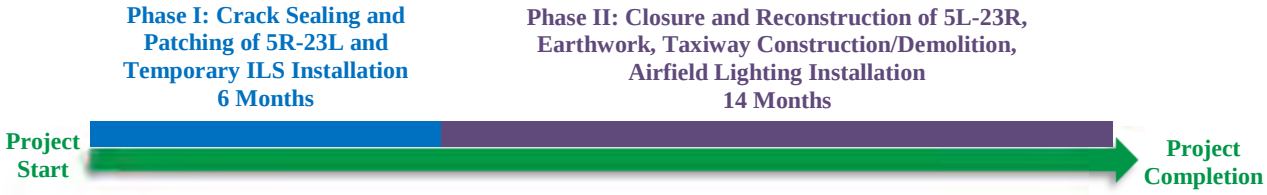
Phase I: Crack Sealing and Patching of 5R-23L and Temporary ILS Installation 6 Months
Phase II: Closure and Reconstruction of 5L-23R, Earthwork, Taxiway Construction/Demolition, Airfield Lighting Installation 14 Months
Project Start
Project Completion

Figure 2-2: Proposed Construction Timeline

Chapter 3
Existing Conditions and Environmental Consequences

CHAPTER 3: EXISTING CONDITIONS AND ENVIRONMENTAL CONSEQUENCES

This chapter provides a detailed description of the existing environment at the Airport to establish the baseline condition. The potential environmental impacts that would result from the Proposed Action and the No-build Alternative are also discussed in this chapter, in accordance with FAA Order 1050.1E, paragraph 405(f). Information provided by various environmental agencies was used to supplement review of available natural resource data, previous studies at the Airport, and the site visit conducted for the proposed project. Although all categories in FAA Orders 1050.1E and 5050.4B were considered for applicability in defining the existing conditions, several environmental resource categories are either not present or would not be measurably impacted by the proposed project, as described in Table 3.1.

Table 3.1
Resources Not Present in the Project Area or Not Measurably Impacted by the Proposed Project

RESOURCE	STATUS
Coastal Resources and Coastal Barriers	Blount County is not located near the coastal zone. Therefore, no impacts would occur to these resources from the proposed project.
Drinking Water Resources	Based on information from the Tennessee Department of Environmental Control (TDEC), no drinking water source protection areas are located in the project area.[a]
Farmlands	Ground disturbance related to the Proposed Action would be located entirely on Airport property, in areas that have been previously impacted by fill and grading activities. As depicted in Appendix B, these soils are identified as "Airport" soils and are not prime farmlands. No acquisition or conversion of Prime farmland or farmland of Statewide, Local, or Unique importance would result from the Proposed Action.
Fish, Wildlife, and Plants	The Proposed Action would occur entirely on Airport property and in close proximity to the existing airfield. As such, the project area is comprised predominantly of paved surfaces, such as runways, taxiways, access roads, and parking areas, as well as mowed/maintained grass infield areas. The Proposed Action would not adversely impact unique fish, wildlife, or biotic communities in the vicinity of the Airport. In accordance with 14 CFR §139.337, *Wildlife Hazard Management*, wildlife are potential hazards to aviation, and as such, the Airport property is managed to discourage wildlife through regular maintenance, such as mowing, as well as specialized management actions for wildlife removal. A Wildlife Hazard Assessment at TYS is currently being finalized.[b]
Floodplains	The proposed project is not located within the 100-year floodplain.[c] The closest 100-year floodplain is associated with a tributary to Lackey Creek, located west of the Airport perimeter road in the vicinity of the large detention basin. Therefore, the Proposed Action would not impact the 100-year floodplain.

Table 3.1
Resources Not Present in the Project Area or
Not Measurably Impacted by the Proposed Project

RESOURCE	STATUS
Section 6(f) Resources	Section 6(f) resources are places such as public parks, trails, courts, and other recreational areas that were purchased in part through grants from the Land and Water Conservation Fund Act of 1965. No Section 6(f) resources are known to exist within or in the vicinity of the project area.[d]
Sole Source Aquifers	There are no sole source aquifers located in the vicinity of the project area.[e]
Wild and Scenic Rivers	No federal[f] or state[g] designated wild or scenic rivers are located in the project area.

SOURCE: Michael Baker Jr., Inc., 2013.
NOTES:
[a] TDEC, Water Resources "Permits Mapviewer," http://tdeconline.tn.gov/tdecwaterpermits/ (October 23, 2013).
[b] Loomacres Wildlife Management, *Wildlife Hazard Assessment of McGhee Tyson Airport 2012-2013*, Draft October 2013.
[c] Federal Emergency Management Agency, Flood Insurance Rate Map Numbers 47009C0128C, 47009C0136C, 47009C0117C.
[d] National Park Service, Land and Water Conservation Fund, "Detailed Listing of Grants by County," http://waso-lwcf.ncrc.nps.gov/public/index.cfm (October 11, 2013).
[e] USEPA, "Designated Sole Source Aquifers in EPA Region IV," http://www.epa.gov/safewater/sourcewater/pubs/reg4.pdf (October 23, 2013).
[f] National Wild and Scenic River System, "Tennessee-Obed River," http://www.rivers.gov/tennessee.php (October 30, 2013).
[g] Tennessee Department of Environment and Conservation (TDEC), "Tennessee's Designated State Scenic Rivers, http://www.tn.gov/environment/natural-areas/scenic-rivers.shtml (October 9, 2013).

Only those resources that would potentially be affected by the proposed project are evaluated further in this chapter. The thresholds for determining whether impacts are significant, as listed in FAA Order 1050.1E, Appendix A, were used to evaluate potential impacts to resources in the project area. Based on these thresholds, no resources would be significantly impacted by the No-build Alternative or the Preferred Alternative (Proposed Action). The potential impacts associated with the Proposed Action are discussed in the following sections.

3.1 LAND USE AND ZONING

3.1.1 Existing Conditions

Blount County, which is located along the eastern boundary of Tennessee, is comprised of approximately 559 square miles of land area and 8.1 square miles of water. In 2007, 98,403 acres of farmland existed in the County, with the average farm size being 85 acres. Blount County contains six cities: Alcoa, Friendsville, Louisville, Maryville, Rockford and Townsend. Alcoa, which is located just south of the Airport, is second to Maryville in size with approximately 8,606 residents.

As discussed in Chapter 1, TYS is a towered facility comprised of two parallel runways on approximately 2,680 acres of property. It is located approximately 12 miles south of

Knoxville. The elevation at the Airport, which is oriented along a ridge, is around 960 feet above mean sea level. The majority of the Airport property that is bounded by the CSX Railroad to the west, Airbase Road to the north, and Alcoa Highway to the east, is comprised of aviation-related development (refer to Figure 3-1). The commercial terminal is located on the east side of the Airport and can be accessed off of Alcoa Highway. The ATCT, TNANG Base, and air cargo facilities are located on the west side of the Airport and are accessed from Airbase Road.

Armona Baptist Church

As depicted on Figure 3-1, approximately 675 acres of Airport property extends west of the CSX Railroad. This property is comprised of agricultural fields/open space. Other development west of the Airport consists of farms, single-family residential development, and the Silver Glen Community, which is a mobile home park. Armona Baptist Church is located at the intersection of Louisville Road and Armona Road. There are some wooded areas and single-family residential development west of Airbase Road. Commercial development, such as hotels, restaurants, and car dealerships, exists in the vicinity of I-140 to the north of TYS and along Alcoa Highway to the northeast. Sherwood Memorial Gardens cemetery is located north of the Airport, and residential development is interspersed to the area north and northeast of the Airport. The Pine Lakes Golf Course is located northeast of the Airport. The area to east of the Airport consists of several land uses, including residential, commercial, agricultural/open space, and industrial.

The City of Alcoa has subdivision regulations that extend outside the city limits and surround the Airport. Blount County retains zoning authority and the City and County plan for the regions.[1] As depicted in Figure 3-2, the area surrounding the Airport property is zoned primarily for residential, commercial, and industrial uses, with a large area west of CSX Railroad zoned for agricultural/residential. "Open Space" applies to large areas suitable for the location of public buildings and public facilities and the "Limited Restriction" zoning classification covers parcels that have not yet been developed or annexed into the City of Alcoa but fall within that planning area.

Unlike a traditional master plan or comprehensive plan, Blount County has addressed planning issues through completion of multiple planning studies. Most recently, the

[1] Blount County Planning Commission, *Supplemental Information and Analysis for Blount County Plan*, approved August 26, 2010, p. 72.

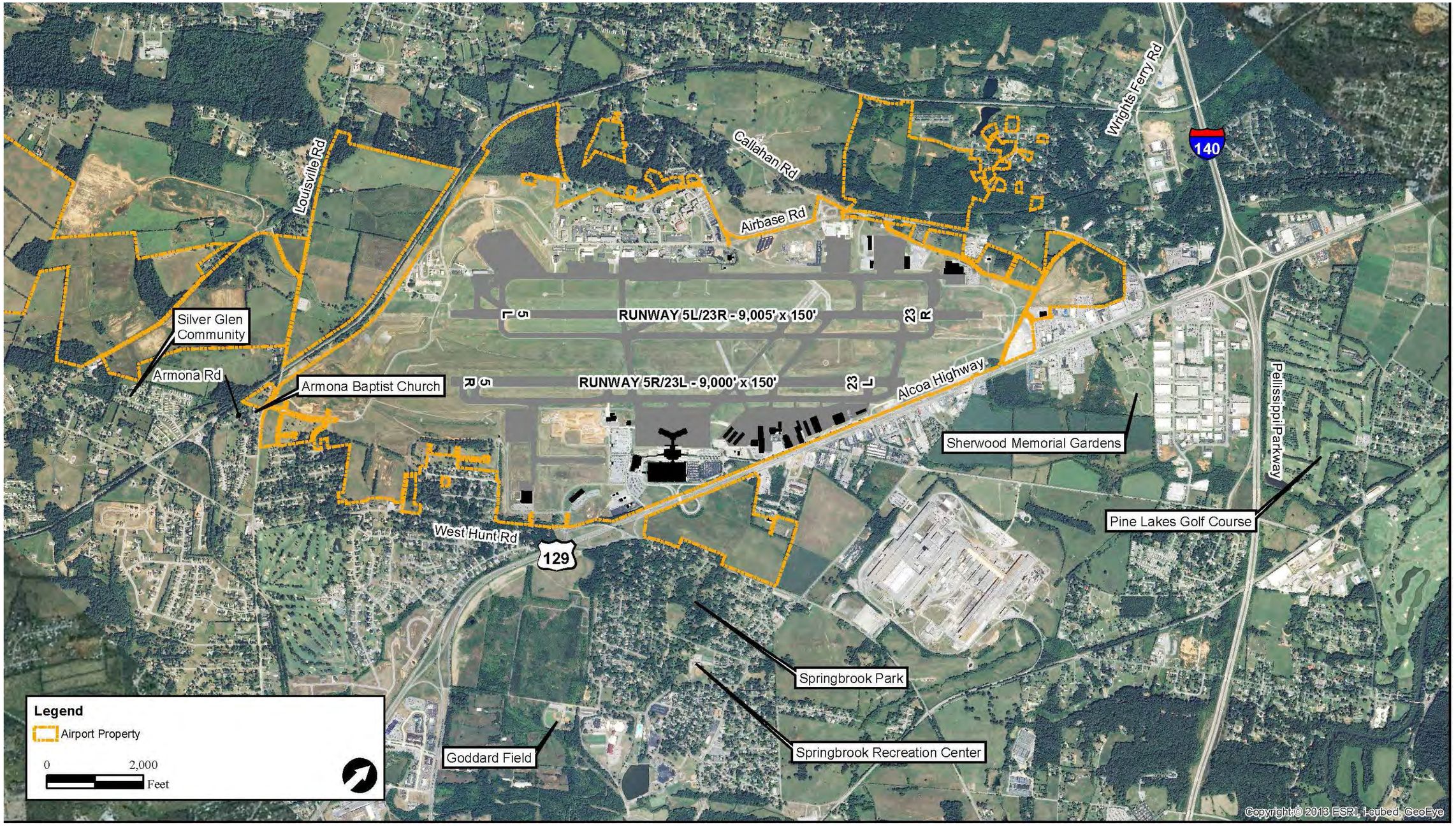

Figure 3-1: Existing Land Use

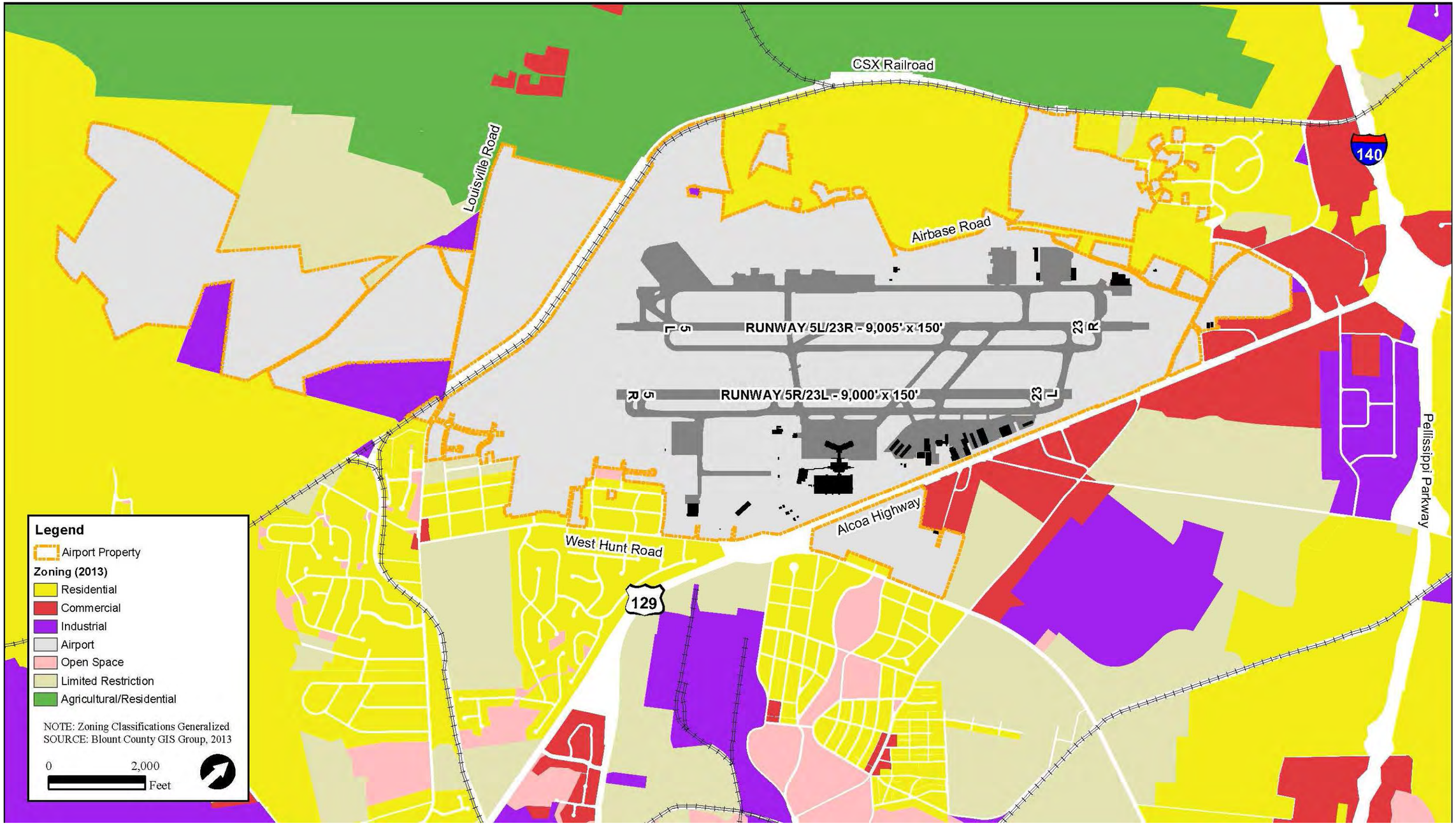

Figure 3-2: Zoning

Supplemental Information and Analysis for Blount County Plans was approved in August of 2010.[2] The Supplemental Information provides background information and analysis of past and future trends with regards to the population, economy, natural resources, infrastructure and land use of Blount County. The Blount County Conceptual Land Use Plan has a 20-year time horizon through 2020 and is maintained by the Blount County Planning Department. This Plan identifies TYS as "Airport – Semi-Autonomous Planned Area", pockets of "Industrial-High Density Development" to the southwest, west, and north, the City of Alcoa to the southeast, and "Suburbanizing – High to Medium Density Development" to the northwest and north.

As a condition of receiving federal funding, the Airport must assure, to the extent possible, that the property within and in the vicinity of the Airport is zoned and restricted to uses compatible with normal airport operations.[3] Blount County currently has zoning in place to restrict the height of objects[4] in the vicinity of the Airport, as well as type of new development located within the 65 day-night average sound level (DNL) noise contour,[5] and therefore comply with this mandate.

3.1.2 Environmental Consequences

The No-build Alternative would have no impact to surrounding land uses and zoning.

With the Proposed Action, land use within and near the project area would remain compatible with the Airport's normal operations. As discussed in Section 3.2, temporary noise impacts are anticipated during reconstruction of Runway 5L-23R when all operations are shifted to Runway 5R-23L. However, these impacts would be limited to an approximately 14-month period during construction.

The Proposed Action would not require land acquisition or relocations. No communities would be disrupted, and minimal socioeconomic impacts are anticipated (refer to Section 3.5). In addition, there would be no impacts to wetlands, streams, and floodplains, and no effect to threatened and endangered species or their critical habitat.

3.2 NOISE AND COMPATIBLE LAND USE

The FAA has a national policy that airports be constructed and operated to minimize current and future noise impacts on surrounding communities.[6] Noise or sound is pressure on the eardrum that is measured on a scale from one to one billion. To simplify this scale, engineers

[2] Blount County Planning Commission, *Supplemental Information and Analysis for Blount County Plan*, approved August 26, 2010, p. 2.
[3] 49 U.S.C. §47107(a)(10).
[4] *Blount County, Tennessee, Zoning Regulations*, "Airport Hazard Overlay," June 15, 2000, Section 9.8.A, p. 32 http://www.blounttn.org/planning/ZONING%20RESOLUTION%208-06%20update%20print%20version.pdf (October 11, 2013).
[5] *Ibid*, Section 9.8.B, p. 32.
[6] 49 U.S.C. §47101(a)(2).

and scientists have established a decibel (dB) scale of 1 to 180 through a mathematical process called a logarithm, which is easier to use. The human ear can only hear certain frequencies of sound, so, in order to show only the level or frequencies that can be heard by the human ear, the scale is given an A-weighting, designated as dBA.

The Day-Night Average Sound Level (DNL) is a noise metric used to evaluate land use compatibility within an airport noise environment. The DNL uses the average of noise levels in dBA as recommended by the FAA for evaluating aircraft noise impacts.[7] Since noise is considered more of an annoyance at night while most people are sleeping rather than during the day, the DNL metric adds a ten decibel penalty (twice as loud) to nighttime operations taking place between the hours of 10 P.M. and 7 A.M. The DNL noise metric was developed by the United States Environmental Protection Agency (USEPA) and is used by the FAA, the United States Department of Housing and Urban Development, and other federal agencies concerned with community noise levels.

Within 14 CFR Part 150,[8] the FAA provides guidelines for land use compatibility corresponding to DNL sound levels of 65 dBA or greater (65, 70, 75, etc.). The 65 DNL is generally accepted as the threshold level at or below which all land uses are considered compatible. Above 65 DNL, noise sensitive land uses such as residential are typically discouraged unless a degree of noise attenuation has been incorporated into the design of the structure. These guidelines are included in Appendix C, which includes the

FAA Order 5050.4B, *NEPA Implementing Instructions for Airport Projects*, requires evaluation of potential noise impacts for existing and future airport conditions. The standard methodology for evaluating the noise exposures associated with airport activity is the FAA's Integrated Noise Model (INM). INM version (v) 7.0d was used in this analysis to develop noise contours for TYS for the following airport conditions:

- 2013 Base Case – existing runway configuration with both runways operational;
- 2014 Future Case – Runway 5R-23L closed for pavement maintenance/upgrades, Runway 5L-23R open;
- 2015 Future Case – Runway 5L-23R closed for reconstruction, Runway 5R-23L open; and,
- 2016 Ultimate Case – both runways fully operational.

For the 2014 and 2015 cases, a No-build Alternative was included for comparison purposes and reflects airport noise conditions without implementation of the Proposed Action.

As explained in greater detail in Appendix C, the INM v 7.0d works by first defining a network of reference points from which to measure noise at ground level around the Airport. Adjustments are applied for Airport climate and environmental characteristics, atmospheric acoustical attenuation, aircraft thrust variations, and time of operation. The noise exposure

[7] FAA, *Environmental Desk Reference for Airport Actions*, October 2007, Chapter 17 – Noise, p. 1.
[8] 14 CFR Part 150, Appendix A, Part B §A150.101.

levels for each aircraft are summed at each reference point to provide a DNL. Noise contours generated by the INM represent outdoor noise levels and depict generally expected average, daily noise exposure at a relative location, rather than noise levels for a single aircraft event. Noise exposure on any one day may be greater or less than the average day.

Effectively modeling airport noise requires many simplifying assumptions to be made regarding the data for INM input variables. The following operational data was utilized in the noise model for the Proposed Action (refer to Appendix C).

- Airport Operations Forecasts
- Fleet Mix
- Time of Day
- Airport Daily Operations
- Runway Utilization Percentages
- Flight Tracks

Federal Aviation Regulation, Part 150, *Airport Noise Compatibility Planning*, is the primary Federal regulation guiding and controlling planning for aviation noise compatibility on and around airports. Within this regulation, the FAA provides guidelines for evaluating various land uses inside aircraft noise exposure areas (refer to Appendix C, Table 8). While all land uses are considered compatible with noise levels of less than 65 DNL, residential and mobile home uses are discouraged from 65 DNL and higher. Other noise sensitive uses such as hospitals, nursing homes, and churches are also discouraged in 65 DNL or greater. Land uses that are less sensitive to noise levels, such as commercial use, are considered compatible with noise levels of 70 DNL without soundproofing, and up to 80 DNL with soundproofing.

Based on the assumptions and inputs that are detailed in Appendix C, the INM was utilized to generate noise contour maps for each noise study case (2013, 2014 Build/No-build, 2015 Build/No-build and 2016). For the purposes of the EA, the Build scenarios are representative of the Proposed Action.

3.2.1 Existing Conditions

The existing noise environment at TYS was evaluated based on the current level of aircraft operations and associated operational characteristics. Figure 3-3 depicts the 2013 Base Case noise contours. These contours depict lines of contiguous noise exposure expressed in DNL, which is the FAA-approved method for land use compatibility determinations in airport noise studies. DNL noise contours are shown on the figure beginning at 65 DNL and increasing in 5 dB increments to 75 DNL. Under existing conditions, the current acreage exposed to 65 DNL or greater is 2,149.4 acres. Of that total, 1,618.7 acres are existing Airport property and 530.7 acres are non-Airport property.

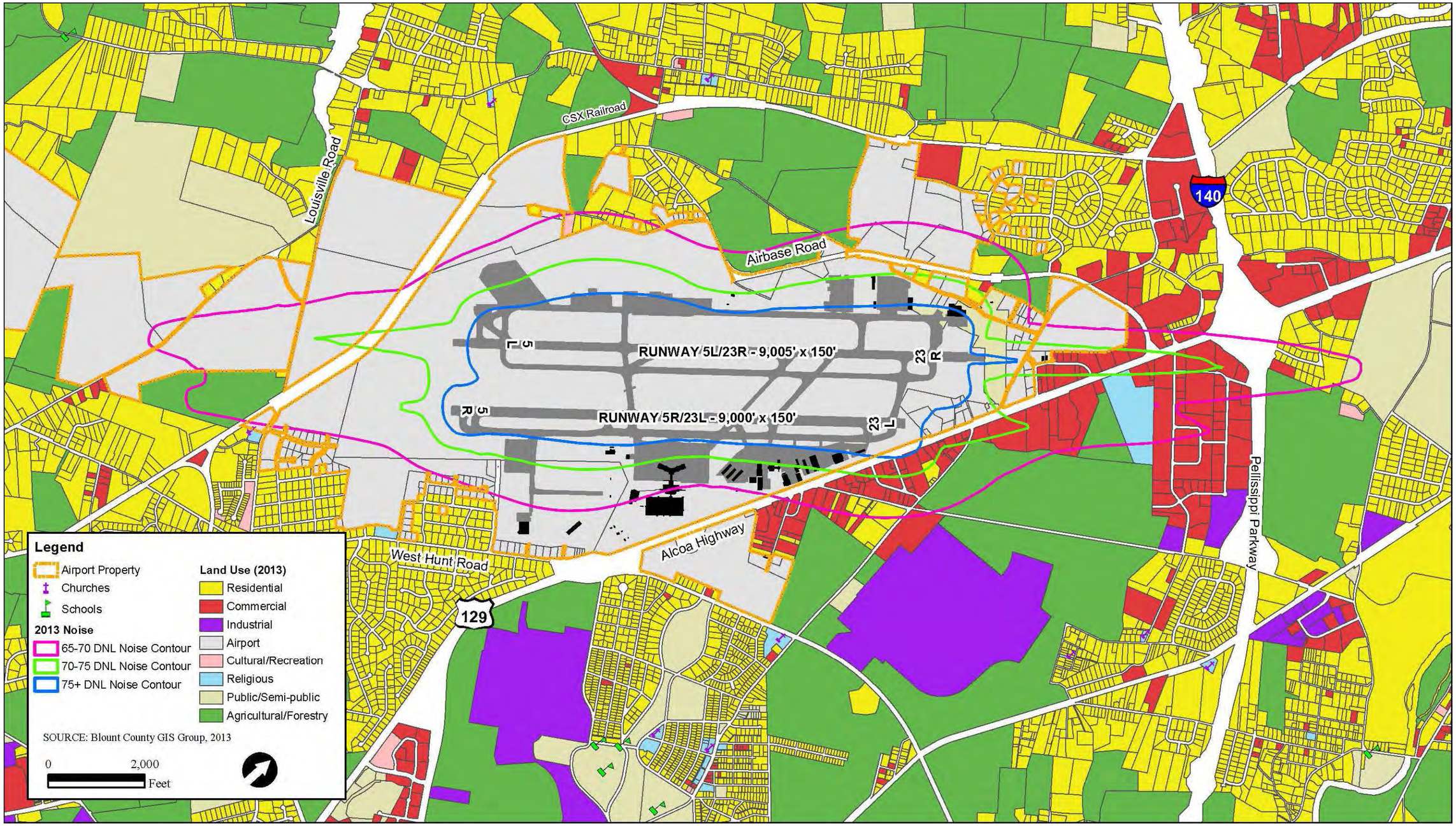

Figure 3-3: Year 2013 Existing Noise Contours

3.2.2 Environmental Consequences

Figures 3-4, 3-5, and 3-6 depict the 2014 Build/No-build, 2015 Build/No-build and 2016 Ultimate Case noise contours, respectively. Table 3.2 lists the acreages of noise exposure within each DNL, for each of the four study years. For the years 2014 and 2015, the Proposed Action and No-build Cases were prepared to evaluate implementation of the Proposed Action. The 2014 Future Build Case reflects closure Runway 5R-23L for crack sealing and ILS installation, and a shift of all airport operations to Runway 5L-23R. The 2015 Future Build Case reflects closure of Runway 5L-23R for reconstruction and a shift of all operations to Runway 5R-23L. In both the 2014 and 2015 No-build Cases, both runways are operational.

Table 3.2
Change in Noise Exposure with Implementation of Proposed Action

	ACREAGE							
		2014			2015			
LOCATION	2013	Build	No-build	Difference	Build	No-build	Difference	2016
On-Airport	1,618.7	1,522.0	1,616.1	**-94.1**	1,344.5	1,614.6	**-270.1**	1,610.3
Off-Airport	530.7	434.0	530.2	**-96.2**	610.2	528.8	**81.4**	525.5
Total	2,149.4	1,956.0	2,146.3	**-190.3**	1,954.7	2,143.4	**-188.7**	2,135.8

SOURCE: Michael Baker Jr., Inc., 2013.

As reflected in Table 3.2, total acreage of land exposed to 65 DNL or greater would be reduced during implementation of the Proposed Action; however, the amount of property exposed off-airport would increase during the 2015 Build Case while Runway 5L-23R is closed for reconstruction. Under existing conditions, the current acreage exposed is 2,149.4 acres. During the 2014 Build Case, total exposure would be reduced by 190.3 acres, with 96.2 acres of that reduction being off-airport property. This reduction in acreage is a result of shifting from the existing two runway system to a one runway system during construction activities, which results in a concentration noise exposure over less area. This is also the case in 2015, when the Build Case would result in a reduction of noise exposure acreage by 188.7 acres. However, in 2015 the concentration of noise is shifted toward Runway 5R-23L and would result in an increase in off-airport noise exposure of 81.4 acres. There is more airport-owned property within the noise contour for the 2013 Base Case; therefore, the shift of the contours southeast toward Runway 5R-23L when all operations would occur on that runway in 2015, results in the increase in off-airport noise exposure.

Noise sensitive land uses located within the 65 DNL noise contour for any scenario were identified, assigned a location point in INM, and analyzed for changes as a result of the Proposed Action. For each of the 156 location points, the estimated DNL was calculated and then compared to each noise case. Figure 3-7 depicts the location of each point analyzed.

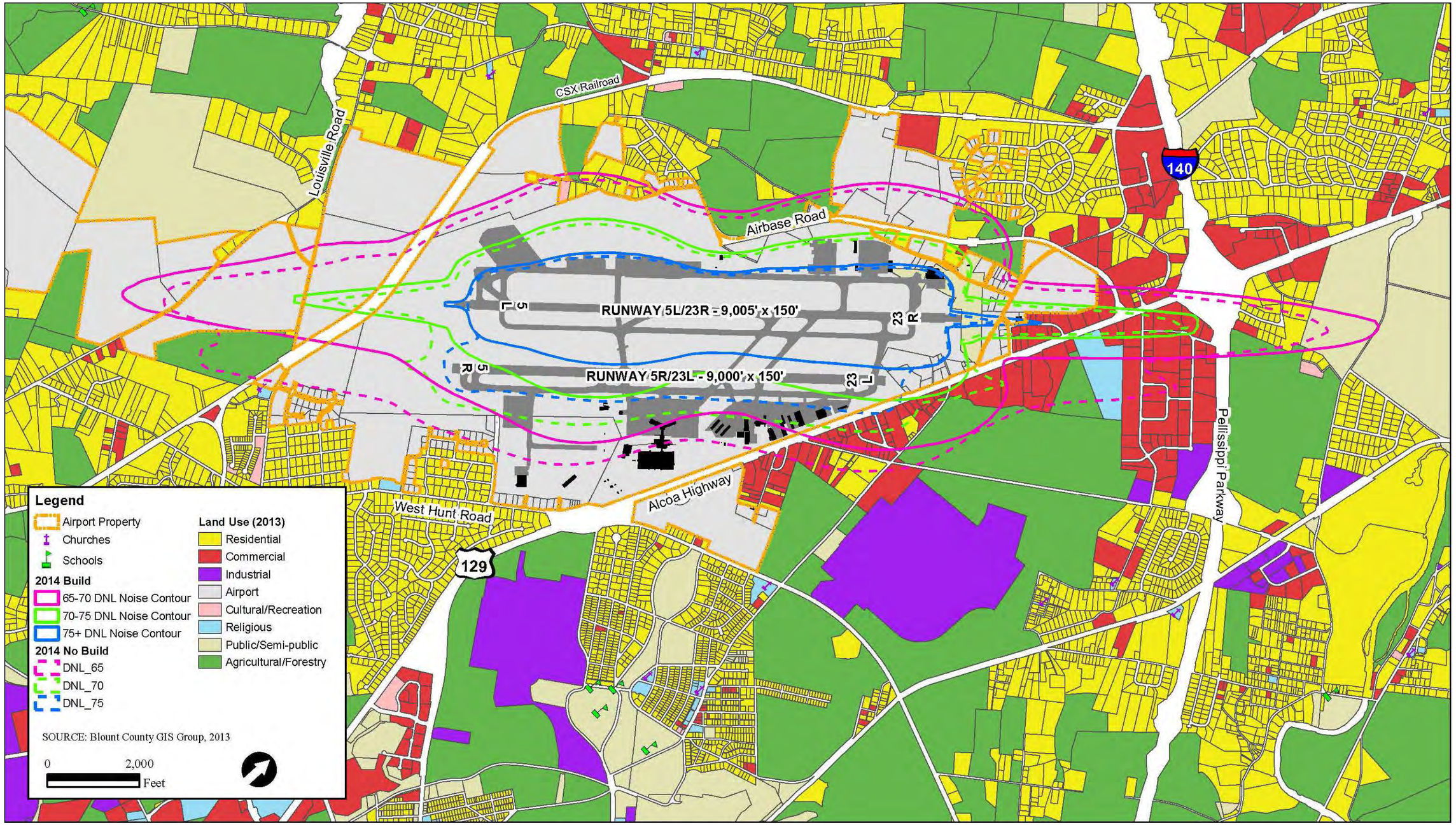

Figure 3-4: Year 2014 Future Case – Runway 5R-23L Closed

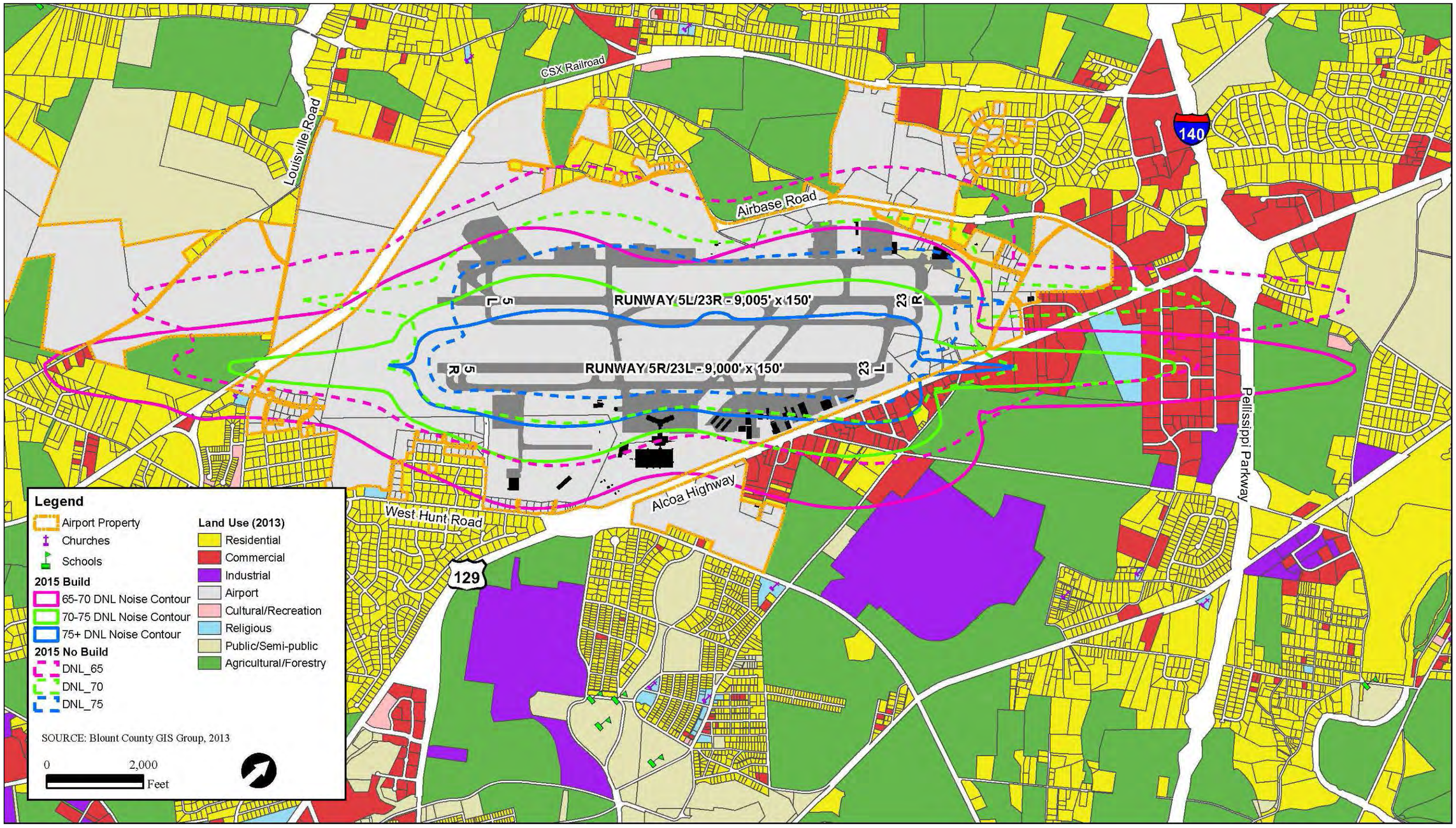

Figure 3-5: Year 2015 Future Case – Runway 5L-23R Closed

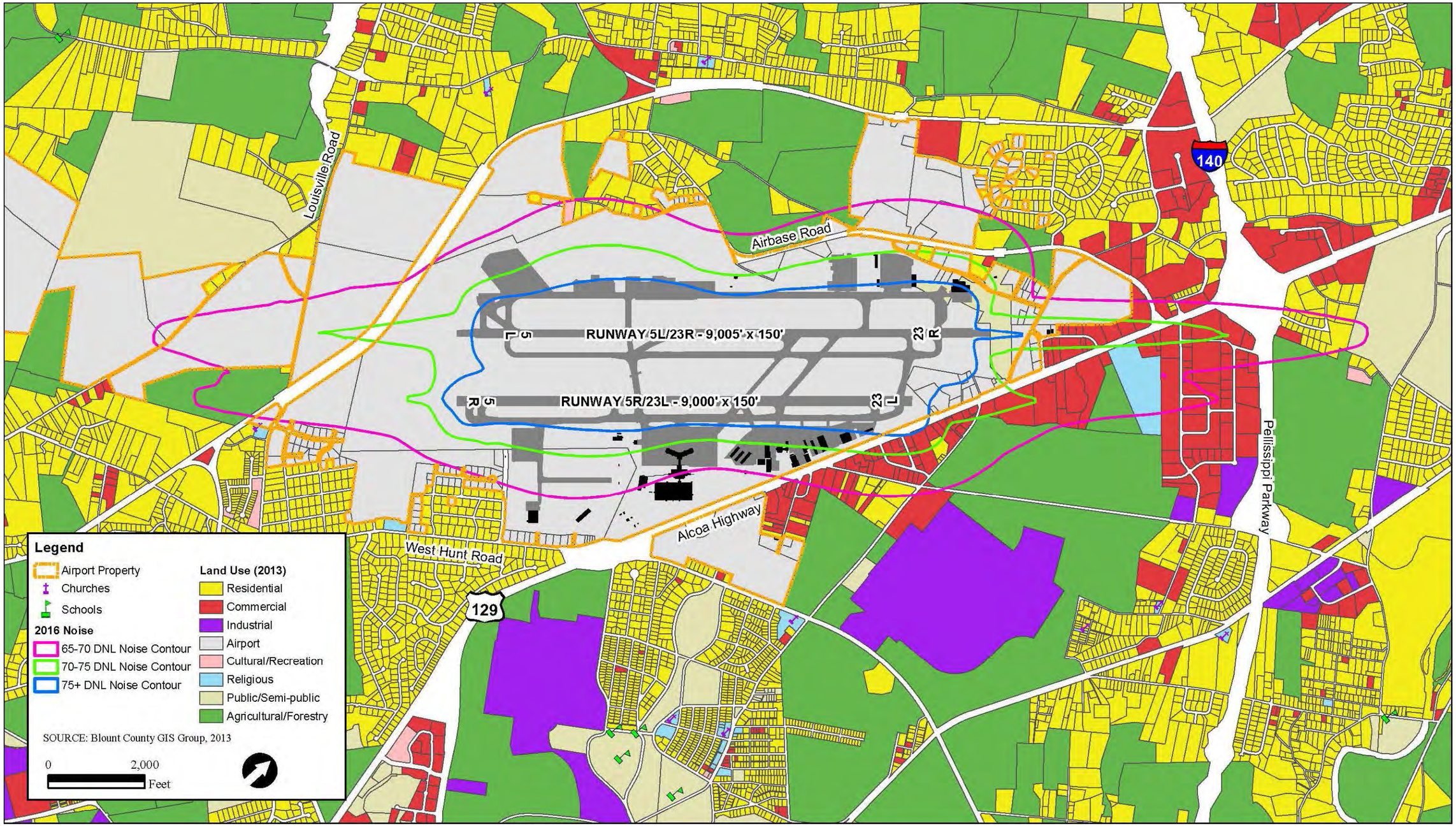

Figure 3-6: Year 2016 Ultimate Case – Both Runways Operational

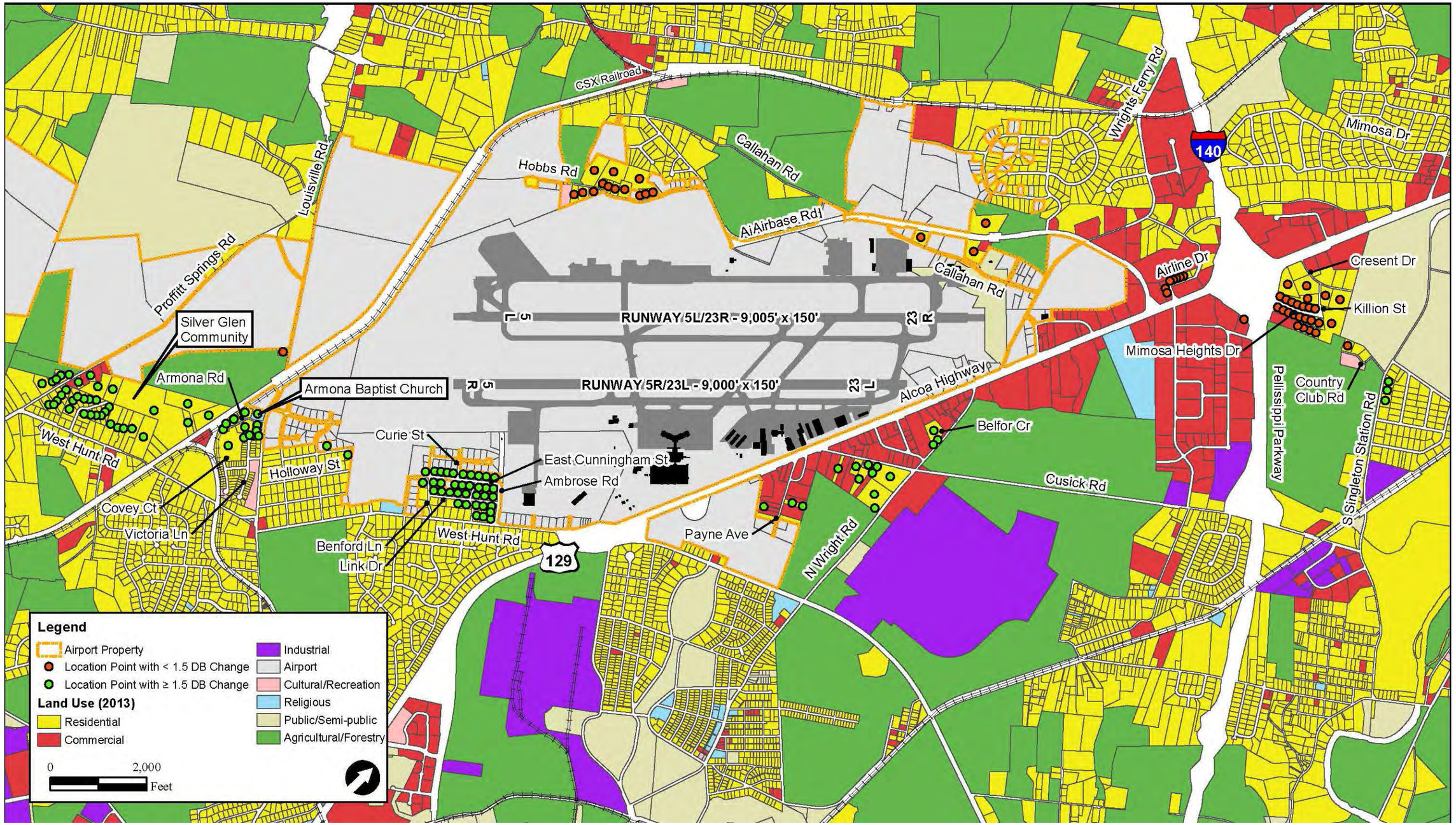

Figure 3-7: Location Point Analysis

The noise sensitive areas that have been assigned points are characterized by residential land use, with the exception of Armona Baptist Church. Review of aerial photography[9] indicates that three of the points (two points at Silver Glen Community and one point on Belfor Circle) represent multiple residences.

FAA Order 1050.1E, *Environmental Policies and Procedures*, provides guidance on environmental impacts at airports and considers an increase of 1.5 dB or greater over a noise sensitive area with the 65 DNL as a significant impact. Based on this guidance, noise levels with and without implementation of the Proposed Action, were compared for each location point identified on Figure 3-7 (refer to Appendix C, Table 10).

In the 2014 Future Build Case, Runway 5R-23L would be closed for pavement maintenance and installation of a temporary ILS as part of the Proposed Action. All aircraft operations would be shifted to Runway 5L-23R. Based upon the results of the location points analysis, no noise sensitive areas would experience noise level increases of 1.5 dB or greater as a result of this action.

With the 2015 Future Build Case, Runway 5L-23R would be closed for reconstruction as part of the Proposed Action. All aircraft operations would be shifted to Runway 5R-23L. Based upon the results of the location points analysis, 104 residential noise sensitive areas and the Armona Baptist church would experience increased noise levels of 1.5 dB or greater, for the approximately 14 months that Runway 5L-23R is closed for reconstruction due to the increased aircraft operations on Runway 5R-23L (refer to Appendix C, Table 10). As discussed above, three of the point identification numbers included in Table 10 of Appendix C, represent multiple residences. The Silver Glen Community (Points 14 and 15) encompasses approximately 123 mobile homes, while the parcel on Belfor Circle (Point 21) encompasses 26 single family residences. Therefore, it is estimated that a total of 248 residences (101 points plus 123 mobile homes at Points 14 and 15 and an additional 24 residences at Point 21) would temporarily experience increased noise levels of 1.5 dB or greater.

In addition to the residential noise impacts noted, Armona Baptist Church would also experience noise increases greater than 1.5 dB during implementation of the Proposed Action. Once the Proposed Action was completed, the noise environment would return to levels comparable to existing conditions.

Based on the results of the noise analysis, implementation of the Proposed Action would cause temporary noise impacts to noise sensitive areas within the vicinity of TYS. These impacts are the result of shifting all operations to Runway 5R-23L during construction in 2015, for a period of approximately 14 months. During this shift, off-airport noise exposure would increase by 81.4 acres causing residential areas and one church to be impacted by noise increases of 1.5 dB or greater within the 65 DNL. Since these

[9] Google earth aerial photograph, April 11, 2012.

increases are temporary in nature, traditional noise mitigation abatement measures, such as land acquisition or sound insulation, would not be practical.

3.3 CULTURAL RESOURCES

3.3.1 Existing Conditions

The *National Historic Preservation Act of 1966* requires federal agencies to review the effects of any proposed actions on historic properties. Historic resources are districts, buildings, sites, structures, or objects that are significant in American history, architecture, archaeology, engineering, and/or culture.[10] Prior to undertaking a project, a federal agency must determine if any resources exist in the project area through detailed literature searches and field surveys. If resources exist, then the federal agency will consult with the Tennessee Historical Commission, State Historic Preservation Officer (SHPO) to determine whether the resource is eligible for listing on the National Register of Historic Places (NRHP) and how the proposed project would impact the resource.

There are no NRHP-listed sites located in the project area. The closest NRHP site is the Samuel George House, which is located approximately 1.3 miles northwest of Airport property on Topside Road near Pellissippi Parkway. During the 1995 Part 150 Study, three other structures in the vicinity of the Airport were identified by the Tennessee Historical Commission as historic or architectural resources of Blount County. These structures include: the ALCOA West Plant Office located southeast of the Airport and Alcoa Highway, the Samuel Yearout House located south of the Airport about ¾ mile west of Alcoa Highway, and the David Chandler House located north of the Airport and Pellissippi Parkway at the intersection of Alcoa Highway and Singleton Station Road. None of these sites are currently listed on the NRHP.[11]

3.3.2 Environmental Consequences

The ground disturbing impacts associated with the Proposed Action would be located on Airport property, in areas that are part of the existing airfield or adjacent areas that have been previously disturbed. With regards to the proposed site to be impacted by grading for the CAT I ILS, this area was heavily impacted by fill and grading activities associated with the 3,000-foot extension of Runway 5R-23L in 1990. Correspondence with the SHPO for that previous Runway 5R-23L project indicated no effect on properties listed on or eligible for listing on the NRHP.

As part of the Proposed Action, no buildings would be demolished and the viewshed would not change from the current airfield development and activities. As discussed in Section 3.2, Noise and Compatible Land Use, the Armona Baptist Church, which is greater than 50 years old, would experience a 3.5 decibel (dB) increase in noise levels

[10] 16 U.S.C. §470(a)(1).
[11] Historic Places Database, http://www.hpdb.org/TN/Blount (November 4, 2013).

during the approximately 14 months that Runway 5L-23R is closed for reconstruction and all aircraft operations are shifted to Runway 5R-23L; however, this potential impact would only be temporary during construction. The Armona Baptist Church is not listed on the NRHP nor is it identified on the Historic Places Database.[12]

Based on coordination with the SHPO in accordance with Section 106 of the *National Historic Preservation Act*, the proposed project would not adversely affect any property that is eligible for listing in the NRHP; thus, the SHPO has no objection to implementation of the Proposed Action (refer to Appendix D).

3.4 SECTION 4(f) RESOURCES

Section 4(f) of the *Department of Transportation Act of 1966* (currently codified as Section 303[c]) provides protection to publicly owned parks, recreation areas, wildlife and waterfowl refuges, and historic sites. Under Section 4(f), properties must not be used unless no prudent and feasible alternative exists, and efforts to minimize impacts to the property are completed.

3.4.1 Existing Conditions

Based on the site visit and review of aerial photography, several Section 4(f) properties were identified in the vicinity of the Airport, including Pine Lakes Golf Course to the north and Springbrook Park, Springbrook Recreation Center, and Goddard Field to the east (refer to Figure 3-1). No NRHP eligible or listed sites that would qualify for protection under Section 4(f) are located on or adjacent to TYS.

3.4.2 Environmental Consequences

The No-build Alternative would have no impact to Section 4(f) resources.

The Proposed Action would not impact Springbrook Park, Springbrook Recreation Center, or Goddard Field located to the east of the Airport. A portion of Pine Lakes Golf Course, which is open to the public, would fall within the 65 DNL noise contour during the approximately 14 months that Runway 5L-23R is being reconstructed. The additional noise impacts anticipated under the Proposed Action in 2015 would only be temporary and no land would be acquired. In accordance with land use compatibility guidelines (refer to Appendix C, Table 8), golf courses and parks are considered compatible with DNLs of 65 to 70 dB. Therefore, significant impacts to Section 4(f) resources would not be anticipated under the Proposed Action.

[12] *Ibid.*

3.5 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

3.5.1 Existing Conditions

As depicted in Figure 3-8, TYS is located in the Eastern Economic Development District, which encompasses 16 counties within the Eastern Division of Tennessee and includes the Knoxville Metropolitan Statistical Area (MSA).[13] Based on U.S. Census data, the Knoxville MSA reported a population of 837,571 in 2010 and is expected to grow to 964,626 people by 2030.[14] As a result of strong economic connections between counties and population growth, the U.S. Office of Management and Budget recently added four counties (Campbell, Grainger, Morgan, and Roane) to the Knoxville MSA.

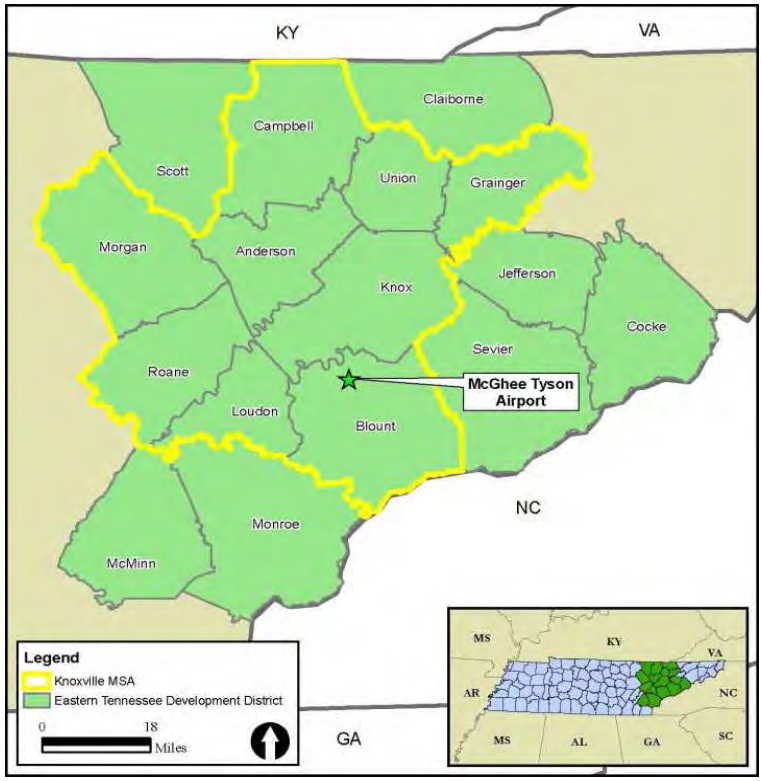

Figure 3-8: Knoxville MSA and Eastern Economic Development District

With regard to quality of life, the region has a cost of living that is 11 percent below the national average; a workforce of 570,000; over 65,000 college and university students; several technology centers such as the Oak Ridge National Laboratory and the National Transportation Research Center; the Great Smoky Mountains National Park; several fine arts venues; a nationally recognized zoo; a professional hockey team and other semi-professional teams.

Blount County is located at the foothills of the Great Smoky Mountains National Park and is known both for a great quality of life and a focus on quality growth that includes an educated workforce and excellent industrial sites and infrastructure.[15] The population of Blount County, which is the tenth most populated county in Tennessee, grew by 16

[13] TDOT, Division of Aeronautics, 2001 State System Plan, Figures 2-1 and 2-2, pp. 46-47, http://www.tdot.state.tn.us/aeronautics/001_TNSYSPlan.pdf (November 5, 2013).
[14] University of Tennessee Center for Business and Economic Research, "Population Projections for the State of Tennessee, 2010-2030," http://tennessee.gov/tacir/PDF_FILES/Other_Issues/Population2010.pdf (November 5, 2013).
[15] East Tennessee Economic Development Agency, "Blount County," http://eteda.org/Print/147.aspx (March 26, 2013).

percent from 2000 to 2010.[16] This growth is anticipated to continue, with the County's population projected to increase by 5.6 percent between 20013 and 2018.[17]

The 2012 labor force for Blount County was 63,860 employees and the area experienced an unemployment rate of approximately 6.8 percent.[18] As listed in Table 3.3, major employers in the county include local hospitals, schools, and manufacturers.

Table 3.3
Major Employers in Blount County

Alcoa Incorporated
Blount County Schools
Blount Memorial Hospital
Clayton Homes
DENSCO Manufacturing Tennessee, Inc.
Marriott Business Services
Rockford Manufacturing Company
Ruby Tuesday Restaurant Support Center
Sanford Brand/Rubbermaid
Skier's Choice
Standard Aero
Team Health

SOURCE: Blount Partnership Economic Development Board, *http://www.blountindustry.com/business_location_services/major_employers.aspx (October 24, 2013).*

The 2010 United States Census data (American Community Survey, 2007-2011/5-Year Summary File) was used at the Block Group (BG) level for determining population and housing characteristics within the project area. A BG is the smallest geographic division that is used by the United States Census Bureau to categorize data.[19] The data for "Percent Below Poverty Level" is not yet available at the BG level; therefore, this information was attained for the larger census tract (CT) level. The Airport comprises CT 9801 BG 1 and is surrounded by eight block groups: CT 116.04 BG 1, CT 102 BG 1, CT 102 BG 2, CT 102 BG 3, CT 102 BG 4, CT 103.01 BG 1, CT 103.02 BG 2, and CT 103.02 BG 3 (refer to Figure 3-9). Table 3.5 provides select demographic and economic characteristics of these BGs, as compared to both Blount County and Tennessee.

As shown in Table 3.4, minority populations in the vicinity of the Airport range from 0 percent (CT 102 BG 4) of the total population to 21.6 percent (CT 102 BG 1). In comparison to the 21.4 percent minority population of the state, the minority percentage for Blount County is much lower at 6.8 percent. Four BGs in the vicinity of the Airport have minority percentages that exceed that of Blount County: CT 116.04 BG 1, CT 102 BG 1, CT 103.01 BG 2, and CT 103.02 BG 3 with 19.1, 21.6, 19.8, and 13.0 percent minority populations, respectively. Only CT 102 BG 1 has a minority population percentage that exceeds that of the state.

[16] University of Tennessee Center for Business and Economic Research, Tennessee State Data Center, "Tennessee 2010 At a Glance," http://cber.bus.utk.edu/pubs/bfox286.pdf (October 30, 2010).
[17] East Tennessee Economic Development Agency, "Blount County," http://eteda.org/Print/147.aspx (March 26, 2013).
[18] East Tennessee Economic Development Agency, "Labor Force Availability by County," http://eteda.org/data_library/workforce/labor_force_availability.aspx (October 30, 2013).
[19] United States Census Bureau, "Glossary," http://factfinder.census.gov/home/en/epss/glossary_a.html (August 30, 2012).

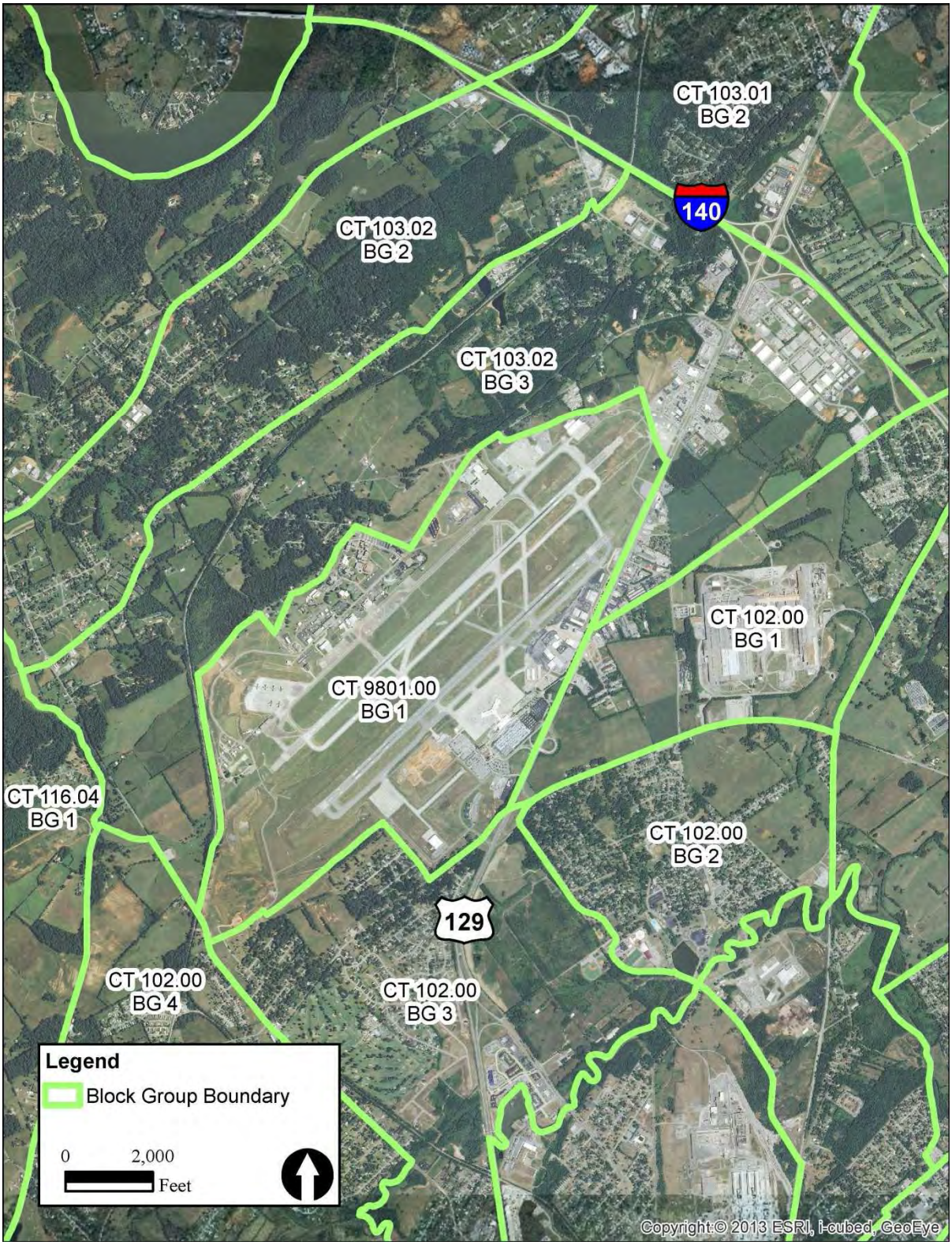

Figure 3-9: Census Blocks

Table 3.4
Select Demographic and Economic Characteristics

AREA	CHARACTERISTIC					
	Total Population	Percent Minorities	Median Age	Average Household Size	Median Household Income (in 2011 dollars)	Percent Below Poverty Level
Tennessee	6,297,991	21.4	38	2	43,989	16.9
Blount County	122,283	6.8	41	2	47,298	12.3
CT 116.04	3,991					4.0
CT 116.04 BG 1	1,499	19.1	38	3	61,250	
CT 102	4,971					7.2
CT 102 BG 1	690	21.6	30	2	25,882	
CT 102 BG 2	1,907	2.8	47	2	46,291	
CT 102 BG 3	735	3.9	57	2	83,233	
CT 102 BG 4	1,639	0.0	44	2	53,681	
CT 103.01	5,025					22.0
CT 103.01 BG 2	1,749	19.8	37	3	35,000	
CT 103.02	3,611					11.7
CT 103.02 BG 2	1,752	2.5	36	3	50,293	
CT 103.02 BG 3	1,027	13.0	36	3	68,875	
CT 9801	0					0
CT 9801 BG 1	5	--	22	0	0	0

SOURCE: U.S. Census Bureau, 2007-2011 American Community Survey 5-year Estimates.

Median ages in the in the vicinity of the Airport range from 22 years in the Airport's BG (CT 9801 BG 1) to 57 years in CT 102 BG 3. Five of the eight BGs in the vicinity of the Airport (not counting the Airport's CT 9800 BG 1) have median ages lower than the overall median age of Blount County. Average household sizes in the vicinity of the Airport, Blount County, and Tennessee range between 2 and 3 persons.

The majority of the population surrounding the Airport has a median household income that is equal to or greater than the overall populations of Blount County and Tennessee. Median household incomes in the vicinity of the Airport range from $25,882 to $83,233, as compared to $47,298 and $43,989 for Blount County and Tennessee, respectively. Only three BGs (CT 102 BG 1, CT 102 BG 2, and CT 103.01 BG 2) have median household incomes that are lower than that of Blount County. Based on the data that is available at the census tract level, only one area, CT 103.01, has a percentage of the population living below the poverty level (22.0 percent) that is larger than that of Blount County (12.3 percent).

Executive Order 12898: *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, requires federal agencies to identify community issues of concern during the NEPA planning process, particularly those issues relating to decisions that may have a disproportionate impact to low-income or minority populations. To determine if there were higher concentrations of environmental justice populations in the vicinity of the Airport, the census tract and block group data pertaining to percentage of low-income and minority populations, respectively, were compared to that of Blount County. With regards to percentage of the population living below the poverty level, one tract (CT 103.01) had a higher percentage than Blount County at 22.0 versus 12.3 percent. Consistent with this data, CT 103.01 BG 2 located within this tract had a median household income of $35,000, which is lower than the county's median income of $47,298. It is also noted that two other BGs had median household incomes below that of Blount County: CT 102 BG 1 and CT 102 BG 2 had median household incomes of $25,882 and $46,291, respectively. Pockets of low-income populations may exist within these BGs. Although the percentage of the population living below the poverty level is low overall for CT 102 at 7.2 percent, this may be due to the higher median household incomes in other BGs within the tract (e.g. CT 102 BG 3 has a median household income of $83,233). As shown in Table 3.4, the minority populations in four BGs comprise a larger percentage of residents than the 6.8 percent minority population that resides in Blount County. These areas, which include CT 116.04 BG 1, CT 102 BG 1, CT 103.01 BG 2, and CT 103.02 BG 3, are therefore identified as containing potential environmental justice populations.

3.5.2 Environmental Consequences

The following resource categories were used to determine the social impacts associated with the proposed project:

- Health or safety risks to children;
- Residential and business relocations;
- Division or disruption of established communities;
- Alteration of transportation patterns;
- Disruption of planned development; and,
- Discernible changes to employment.

The No-build Alternative would not result in social impacts to the communities surrounding the Airport.

Per Executive Order 13045: *Protection of Children from Environmental Health Risks and Safety Risks*, federal projects should be evaluated to determine whether there would be impacts to the environmental health or safety of children. Specifically, projects must be evaluated to determine if there would be products or substances released into the environment as a result of construction of the proposed project that would be touched or ingested by children. Grading and other earthwork associated with the Proposed Action

would be limited to existing Airport property. Equipment, materials stockpiles, and associated supplies needed for the Proposed Action would be limited to the Airport property, which is secured. As discussed in Section 3.2, noise impacts to locations off airport property would only be temporary during construction. The Proposed Action would not release any products or substances in the environment that would pose a significant risk to the health or safety of children; therefore, no further analysis is necessary.

The Proposed Action would not result in land acquisition or residential or business relocations, as it would be located entirely on Airport property. Armona Baptist Church and residential areas south and east of the Airport would experience increased noise for approximately 14 months during reconstruction of Runway 5L-23R. However, the Proposed Action would not result in the division of established communities, disruption of short-term or long-term traffic patterns, disruption of planned development, or relocations of community facilities, such as schools, churches, and/or medical facilities, or established communities. No discernible changes to employment are anticipated.

3.5.2.A Environmental Justice

Potential environmental justice impacts that may result from the Proposed Action were reviewed, as required by Executive Order 12898, including impacts from property acquisition, relocations, community disruptions, and noise. As discussed in Section 4.1, the initial scoping comments provided by the USEPA included a request that potential socioeconomic and health related impacts to environmental justice populations be evaluated.

Based on United States Census Data, the potential exists for environmental justice populations to be located within the vicinity of the Airport (refer to Section 3.4.1). The Proposed Action would not result in any significant impacts to human health, historic or cultural resources, or communities.

With regards to noise, approximately 43 single family residences are located within the BGs that could potentially have environmental justice populations (CT 116.04 BG 1, CT 102 BG 1, CT 103.01 BG 2, and CT 103.02 BG 3). These 43 residences would experience temporary noise increases of 1.5 dB or greater during the 14-month period that all airfield operations are being conducted on Runway 5R-23L while Runway 5L-23R is being reconstructed. Even though these temporary impacts would occur, they are not disproportionately high (i.e. 43 residences constitutes less than 18 percent of the total 248 residences identified as temporarily impacted) or adverse to potential environmental justice populations; rather they are due to the location of the Airport and the existing airfield configuration relative to the adjacent residences and property. The Silver Glen Community is located in CT 102.00 BG 4, which based on 2010 Census data has a minority population of 0 percent and a median household income that is $6,383 above that of Blount County. If a low-income environmental justice population does exist at this location, the noise impacts would temporary during the 14-month reconstruction of Runway 5L-23R and not disproportionately adverse. Based on this evaluation of

potential environmental justice impacts, the Proposed Action would be in compliance with Executive Order 12898.

3.5.2.B Induced Socioeconomic Impacts

Socioeconomic impacts to communities are evaluated by determining if they would result in changes to business or economic activities, cause shifts in patterns of population movement and growth, or change demands for public services. These economic impacts are categorized as:

- **Direct Impacts –** expenditures directly related to the construction and development as well as operation of facilities at the Airport;
- **Indirect Impacts –** expenditures or investments not directly tied to the Airport operations or development, but related to the Airport in part; and,
- **Induced Economic Impacts –** expenditures realized as a result of successive rounds of spending and re-spending of direct and indirect investments, commonly referred to as the multiplier or "ripple" effect of spending.

McGhee Tyson Airport is estimated to result in an annual $1 billion in direct and indirect economic impacts, including payroll, local spending, transportation cost savings, capital spending and induced benefits.[20] With approximately 2,700 people employed at TYS, jobs and the payroll are among the most important direct benefits of TYS on the surrounding area.[21] While the No-build Alternative would not have any direct, indirect or induced economic impacts related to construction, it would have expenditures related to the existing operations at the Airport and could ultimately result in negative economic impacts. Under the No-build Alternative, continued aircraft operations on the deteriorated Runway 5L-23R pavement would result in increasing maintenance costs, frequency of repairs, and potential damage to aircraft (refer to Section 2.3, page 2-3). Not addressing the deteriorated pavement on Runway 5L-23R would eventually impact the ability of the TNANG units operating at TYS to fulfill their missions and could also result in loss of service by commercial and air cargo carriers due to a loss of redundancy with two runways. The Proposed Action would allow for the maintenance and rehabilitation of the pavement infrastructure in the most fiscally responsible manner possible. This would result in a positive economic benefit to the Airport and ultimately, the region.

The Proposed Action would produce direct short-term construction jobs. In addition, purchases of materials for the construction of the Proposed Action would be a direct impact to the economy in the area. Indirect impacts would result in the re-spending of wages earned by construction workers working on the Proposed Action as well as those workers who are at companies where materials are purchased for the Proposed Action. Ripple effects would occur when this money is then re-spent on other goods and services within the local economy. While it cannot be quantitatively estimated at this time how

[20] MKAA, "About MKAA," http://tys.org/about_mkaa.php (November 1, 2013).
[21] *Ibid.*

much the Proposed Action would impact the local economy, it is anticipated that it would qualitatively have a positive effect above and beyond the No-build Alternative.

The Proposed Action would not require property acquisition and therefore, is not likely to cause shifts in patterns of population movement and growth. Due to the short-term nature of construction (approximately two years), it is not likely to foster any sustainable population growth in Blount County.

State and local tax revenues would increase due to the construction of the proposed project, given that a portion of the direct construction expenses for materials would be subject to state and local taxes. In addition, individual income taxes and indirect/induced spending of household income would provide additional tax revenues above and beyond the No-build Alternative.

There would be no shift in populations or new population growth due to the economic boost from the Proposed Action, and increased demand in new areas for public services such as new infrastructure, water/sewer, safety services, or government services is not likely. The anticipated impacts from noise when all operations are shifted to Runway 5R-23L during reconstruction of Runway 5L-23R would be temporary, lasting approximately 14 months.

Socioeconomic impacts such as population shifts or growth, public service demands, or adverse impacts to related resources would be minimal from the proposed project. Overall, the economic benefits would be positive on a local and regional scale from the Proposed Action, above and beyond what is anticipated with the No-build Alternative.

3.6 AIR QUALITY

The National Ambient Air Quality Standards (NAAQS) were established by the USEPA under the *Clean Air Act* (CAA) to protect public health, the environment, and the quality of life from the detrimental effects of air pollution. The NAAQS have been set for the following criteria pollutants: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), and sulfur dioxide (SO_2). The NAAQS primary standards to protect human health and secondary standards to protect human welfare are listed in Table 3.5.

In accordance with the CAA, all portions of Tennessee are designated as either in attainment, non-attainment, or unclassifiable for meeting NAAQS standards. An area with air quality that meets NAAQS standards is considered to be in attainment, while an area with air quality that does not meet NAAQS standards is designated as being in non-attainment.[22] If there is a lack of information for determining an attainment status, the area is designated as unclassifiable. Each state determines which areas within its boundaries are designated to be

[22] USEPA, Office of Air and Radiation, "Cleaning Up Commonly Found Air Pollutants," http://www.epa.gov/air/peg/cleanup.html (October 30, 2013).

in attainment or non-attainment, and must develop a State Implementation Plan to ensure that areas achieve and/or maintain attainment status for NAAQS standards.

Table 3.5
National Ambient Air Quality Standards

POLLUTANT	STANDARD			
	Averaging Time	PPM[a]	µG/M[3b]	Type of Standard[c]
Carbon monoxide (CO)	1-hour	35	40,000	Primary
	8-hour	9	10,000	Primary
Lead (Pb)	Rolling 3-month average	-	0.15	Primary & Secondary
Nitrogen dioxide (NO_2)	Annual mean	0.053	-	Primary & Secondary
	1-hour	0.10	-	Primary
Ozone (O_3)[d]	8-hour	0.08	-	Primary & Secondary
Particulate matter (diameter less than/equal to 10 µm, PM_{10})	24-hour	-	150	Primary & Secondary
Particulate matter (diameter less than/equal to 2.5 µm, $PM_{2.5}$)	24-hour	-	35	Primary & Secondary
	Annual mean	-	15	Secondary
	Annual mean	-	12	Primary
Sulfur oxides (SO_x)	1-hour	0.075	-	Primary
	3-hour	0.5	-	Secondary

SOURCE: USEPA, Office of Air and Radiation, http://www.epa.gov/air/criteria.html (October 31, 2013).
[a]PPM = parts per million.
[b]µG/M[3] = micrograms per cubic meter.
[c]Primary standards are set to protect public health. Secondary standards are designed to protect public welfare.
[d]The USEPA is currently reconsidering the standards for ozone. Until a decision is reached, the 1997 standard remains in place.

Air pollutants at airports can be released by aircraft, ground support equipment, ground access vehicles, and stationary sources. In addition, an airport's configuration can also factor into the amount of air emissions at an airport. Construction activities at an airport also have the potential to release air pollutants into the environment.

3.6.1 Existing Conditions

The Airport is located in Blount County, which is designated as being in non-attainment for the $PM_{2.5}$ (2006) and marginal non-attainment for 8-hour ozone (2008) standard.

However, it is in attainment for all other NAAQS criteria pollutants.[23] Non-attainment pollutants related to this project area are discussed below and include: Ozone (O_3) and its precursors; nitrogen oxides (NO_x); and, hydrocarbons (HC), specifically volatile organic compounds (VOCs), particulate matter (PM), and sulfur oxides (SO_x) emissions (as a $PM_{2.5}$ precursor).

3.6.1.A Ozone

Ground-level ozone (O_3) is created when NO_x compounds chemically react with volatile organic compounds (VOCs) in the presence of sunlight.[24] Since sunlight is required for its formation, it is known as a summertime air pollutant and can accumulate in harmful quantities during hot weather and extended periods of sunny weather.[25] Sources of NO_x and VOCs that create O_3 include vehicle exhaust emissions, gasoline vapors, industrial emissions, and chemical solvents.

While O_3 is beneficial in the upper atmosphere of the earth to shield it from the sun's potent ultraviolet rays, ground-level ozone can be harmful. Once it builds up in the environment, O_3 can cause respiratory problems, especially to those with existing respiratory conditions such as asthma or emphysema.[26] Ground-level O_3, like NO_x (discussed below), can be carried far distances by prevailing winds, and can damage plants and ecosystems.[27] From 1980 to 2010, there has been a 28 percent decrease in the national annual 4th maximum 8-hour average.

3.6.1.B Nitrogen Oxides

Nitrogen oxides are an ozone precursor affecting terrestrial and aquatic ecosystems. Nitric oxide (NO), the nitrate radical (NO_3), and nitrogen dioxide (NO_2), are collectively called nitrogen oxides (NO_x).[28] NO_x is generally emitted in the form of NO, which is oxidized to NO_2. While most NO_x is odorless and colorless, NO_2 can be seen as a reddish haze. The principal anthropogenic source of NO_x is fuel combustion in motor vehicles and power plants.

Due to its ability to be carried over great distances by prevailing winds, NO_x can cause a multitude of different impacts on the environment. NO_x is one of the primary components of ground-level ozone (O_3), which adversely affects the respiratory system, causing headaches, eye/nasal irritation, chest pain, and lung inflammation.[29] In addition,

[23] USEPA, "Greenbook," http://www.epa.gov/oar/oaqps/greenbk/anayo_tn.html (October 30, 2013).
[24] USEPA, Office of Air and Radiation, "Ground-level Ozone – Basic Information," http://www.epa.gov/air/ozonepollution/basic.html (October 31, 2013).
[25] *Ibid.*
[26] USEPA, Office of Air and Radiation, "Ground-level Ozone – Health Effects," http://www.epa.gov/airquality/ozonepollution/health.html (October 31, 2013).
[27] *Ibid.*
[28] USEPA, Office of Air and Radiation, "Nitrogen Dioxide – Basic Information" http://www.epa.gov/airquality/nitrogenoxides/basic.html (October 31, 2013).
[29] USEPA, Office of Air and Radiation, "Nitrogen Dioxide – Health," http://www.epa.gov/airquality/nitrogenoxides/health.html (October 31, 2013).

it can contribute to the formation of acid rain and can combine with other air particles to produce toxic substances, as well as cause deterioration of waterbodies and visibility. From 1980 to 2010, there has been a 52 percent decrease in the national annual arithmetic NO_2 average.

3.6.1.C Particulate Matter

Particulate matter (PM) is separated into two different sizes for the purpose of the NAAQS, $PM_{2.5}$ and PM_{10}. The nomenclature refers to PM with a diameter of 2.5 microns (µm) or less, and 10 µm or less, respectively. PM forms when small solid particles combine with liquid droplets to form dust, dirt, haze, soot, or smoke.[30] These substances can be emitted from primary sources such as unpaved roads, construction sites, fields, or smokestacks. They can also be emitted as a result of secondary reactions of gases released from automobiles and industrial plants.[31]

PM can cause problems to the cardiovascular and respiratory systems, including irregular heartbeat, non-fatal heart attacks, decreased lung function, airway irritation, development of chronic bronchitis, and aggravation of asthma and emphysema.[32] PM is the major cause of haze in the United States, and since it can be carried great distances by prevailing winds, can cause damage to ecosystems and waterbodies wherever it ultimately settles.

From 1990 to 2010, there has been a 38 percent decrease in the national annual 2nd maximum 24-hour PM_{10} average. From 2000 to 2010, there has been a 27 percent decrease in the national seasonally-weighted annual $PM_{2.5}$ average.

3.6.1.D Carbon Monoxide

Carbon monoxide (CO) forms when carbon is not completely burned in fuel. It is an odorless and colorless gas that can temporarily accumulate at harmful levels in areas with heavy traffic congestion or areas that experience inversions during the winter months.[33] In addition, CO aids in the formation of ground-level ozone. CO can be generated by natural sources, such as forest fires, and from anthropogenic sources including vehicle exhaust, industrial processes, indoor heating, and open burning.[34]

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[30] USEPA, Office of Air and Radiation, "Particulate Matter," http://www.epa.gov/airquality/particlepollution/ (October 31, 2013).
[31] *Ibid.*
[32] USEPA, Office of Air and Radiation, "Particulate Matter – Health," http://www.epa.gov/airquality/particlepollution/health.html (October 31, 2013).
[33] Inversions occur in the winter months during calm weather when a warm layer of air traps cold air and pollutants closer to the ground. Since CO is more chemically stable at colder temperatures, it can accumulate at harmful levels during inversions. From USEPA, Office of Air and Radiation, "Carbon Monoxide," http://www.epa.gov/airquality/carbonmonoxide/index.html (October 31, 2013).
[34] *Ibid.*

CO is harmful to the respiratory, cardiovascular, and nervous systems since it deprives these systems of oxygen, and at high levels it may cause poisoning and death.[35] From 1980 to 2010, there has been a 82 percent decrease in the national annual 2nd maximum 8-hour concentration.

3.6.1.E Sulfur Dioxide

Sulfur Dioxide (SO_2) is one of a group of highly reactive gasses known as "oxides of sulfur." SO_2 is formed when sulfur, found naturally in raw material, is combusted or processed, and as a result, sulfur is released into the environment and combines with oxygen.[36] The largest sources of SO_2 emissions are from fossil fuel combustion at power plants (73 percent) and other industrial facilities (20 percent). Smaller sources of SO_2 emissions include industrial processes such as extracting metal from ore, and the burning of high sulfur containing fuels by locomotives, large ships, and non-road equipment. SO_2 is linked with a number of adverse effects on the respiratory system. From 1980 to 2010, there has been a 83 percent decrease in the national annual arithmetic average.

3.6.2 Environmental Consequences

In accordance with FAA guidance, if the "level of annual enplanements exceeds 1,300,000, the level of general aviation and air taxi activity exceeds 180,000 operations per year, or a combination thereof, a NAAQS assessment should be considered."[37] The Airport is forecasted to have 877,202 enplanements and 106,059 operations in 2013.[38] Based on the forecasted data for TYS through the 2030, the annual enplanements and operations are projected to remain below the threshold requiring an air quality analysis;[39] thus, an air quality analysis was not conducted.

CO is a pollutant of concern at airports, as it can be emitted by ground support equipment and access vehicles in operation or idling; vehicular traffic traveling to and from an airport and surrounding area; and, from aircraft that are taxiing or delayed on the ground. Significant airport ground delays and/or adjacent roadway network congestion could result in CO emissions that would exceed the NAAQS standards. If a project would not increase airport capacity, lead to increased congestion of roadways or airfields, or relocate aircraft and vehicular activity closer to sensitive receptors, then CO emissions are not likely to exceed the NAAQS. The Proposed Action would not increase airfield

[35] USEPA, Office of Air and Radiation, "Health and Environmental Impacts of CO," http://www.epa.gov/airquality/carbonmonoxide/health.html (October 31, 2013).
[36] USEPA, Office of Air and Radiation, "Health and Environment – Sulfur Dioxide," http://www.epa.gov/airquality/sulfurdioxide/health.html (October 31, 2013).
[37] FAA, *Air Quality Procedures for Civilian Airports and Air Force Bases*, p. 19, http://www.faa.gov/regulations_policies/policy_guidance/envir_policy/airquality_handbook/media/Handbook.PDF (October 30, 2013).
[38] FAA, *APO Terminal Area Forecast Summary Report*, January 2013 https://aspm.faa.gov/wtaf/summary.asp?line=SELECT+*+FROM+WTAF+WHERE+SYSYEAR>^2012+AND+SYSYEAR<^2040+AND+(LOC_ID^~TYS~) (October 30, 2013).
[39] *Ibid*.

capacity or result in significant airport ground delays or roadway network congestion. While the reconstruction program is underway, all airfield operations would be relocated on one runway or another, depending on the project phase. However, this would be a temporary shift in aircraft activity, and sensitive receptors are not adjacent to the runways. Once the project is completed, airfield operations would resume on both runways, further reducing airport ground delays. Therefore, CO emissions would not be anticipated to exceed the NAAQS standards during or after construction. Impacts to air quality are not anticipated as a result of the Proposed Action.

In accordance with the FAA's *Environmental Desk Reference for Airport Actions*, "air quality analyses undertaken to comply with the disclosure requirements of the National Environmental Policy Act and substantive requirements of the Clean Air Act General Conformity regulations must include air quality emissions the project's construction activities would cause."[40] Therefore, construction emissions were calculated and compared to the *de minimis* criteria for the nonattainment and maintenance pollutants in the project area. This analysis, included in Section 3.15.2, Air Quality Impacts from Construction (refer to page 3-45), determined that construction activities from the Proposed Action would not result in air quality impacts.

The No-build Alternative would not result in air quality impacts.

3.7 CLIMATE CHANGE

3.7.1 Existing Conditions

Of growing concern is the impact of proposed aviation projects on climate change. Greenhouse gases are those that trap heat in the earth's atmosphere. Both naturally occurring and anthropogenic (man-made) greenhouse gases include water vapor (H_2O), carbon dioxide (CO_2),[41] methane (CH_4), nitrous oxide (N_2O), and ozone (O_3).[42]

Research has shown that there is a direct link between fuel combustion and greenhouse gas emissions. Therefore, sources that require fuel or power at an airport are the primary sources that would generate greenhouse gases. Aircraft are probably the most often cited air pollutant source, but they produce the same types of emissions as cars. Aircraft jet engines, like many other vehicle engines, produce carbon dioxide (CO_2), water vapor (H_2O), nitrogen oxides (NO_x), carbon monoxide (CO), oxides of sulfur (SO_x), unburned

[40] FAA, *Environmental Desk Reference for Airport Actions*, October 2007, Chapter 6, Construction Impacts, Subsection 4a (General), p. 2.
[41] All greenhouse gas inventories measure carbon dioxide emissions, but beyond carbon dioxide different inventories include different greenhouse gases (GHGs).
[42] Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also greenhouse gases, but they are, for the most part, solely a product of industrial activities. For example, chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) are halocarbons that contain chlorine, while halocarbons that contain bromine are referred to as bromofluorocarbons (i.e., halons) or sulfur (sulfur hexafluoride: SF_6).

or partially combusted hydrocarbons (also known as volatile organic compounds [VOCs]), particulates, and other trace compounds.

According to most international reviews, aviation emissions comprise a small but potentially important percentage of anthropogenic (human-made) greenhouse gases and other emissions that contribute to global warming. The Intergovernmental Panel on Climate Change (IPCC) estimates that global aircraft emissions account for about 3.5 percent of the total quantity of greenhouse gas from human activities.[43] In terms of the United States contribution, the United States General Accounting Office (GAO) reports that aviation accounts "for about 3 percent of total United States greenhouse gas emissions from human sources" compared with other industrial sources, including the remainder of the transportation sector (23 percent) and industry (41 percent).[44]

The scientific community is developing areas of further study to enable them to more precisely estimate aviation's effects on the global atmosphere. The FAA is currently leading or participating in several efforts intended to clarify the role that commercial aviation plays in greenhouse gases and climate change. The most comprehensive and multi-year program geared towards quantifying climate change effects of aviation is the Aviation Climate Change Research Initiative (ACCRI) funded by FAA and the National Aeronautics and Space Administration (NASA). ACCRI will reduce key scientific uncertainties in quantifying aviation-related climate impacts and provide timely scientific input to inform policy-making decisions. FAA also funds Project 12 of the Partnership for AiR Transportation Noise & Emissions Reduction (PARTNER) Center of Excellence research initiative to quantify the effects of aircraft exhaust and contrails on global and United States climate and atmospheric composition. Finally, the Transportation Research Board's (TRB) Airport Cooperative Research Program (ACRP) Project 02-06 has prepared a guidebook on preparing airport greenhouse gas emission inventories, which was released on September 30, 2009.[45] While not policy, airports can use this as a resource to assist them in preparing airport greenhouse gas emission inventories, when applicable.

3.7.2 Environmental Consequences

Based on FAA data, operations activity at the Airport represents less than 0.099 percent of United States aviation activity.[46] Therefore, assuming that greenhouse gases occur in proportion to the level of activity, greenhouse gas emissions associated with existing and future aviation activity at the Airport would be expected to represent less than 0.099 percent of United States-based greenhouse gases. Therefore, the emissions of greenhouse

[43] IPCC Report as referenced in GAO *Environment: Aviation's Effects on the Global Atmosphere Are Potentially Significant and Expected to Grow*; GAO/RCED-00-57, February 2000, p. 4.
[44] *Ibid*., p. 14; GAO cites available USEPA data from 1997.
[45] ACRP, *Report 11: Guidebook on Preparing Airport Greenhouse Gas Emission Inventories*, September 2009, http://onlinepubs.trb.org/onlinepubs/acrp/acrp_rpt_011.pdf (October 31, 2013).
[46] FAA, *APO Terminal Area Forecast for TYS*, January 2013.

gases produced as the result of the Proposed Action would be minimal. The No-build Alternative would have no impact on greenhouse gas emissions.

3.8 WATER QUALITY

3.8.1 Existing Conditions

3.8.1.A Groundwater Resources

The project area is situated over the Valley and Ridge Physiographic Province, and as shown on Figure 3-10, is located at the top of a ridge. According to the USGS, groundwater aquifers in the Valley and Ridge Physiographic Province are typically present in the valleys and are rarely present on the broad, dissected ridges.[47] In addition, the recharge areas for these aquifers are located in the valleys near lakes and rivers.

3.8.1.B Surface Water Resources

The project area is located in the Lackey Creek (060102010210) and Little River-Roddy Branch (060102010203) watershed sub-units. These watershed sub-units drain into the Tennessee River, which eventually flows into Fort Loudon Lake. Unnamed tributaries on the southwest side of the Airport drain into Lackey Creek, while unnamed tributaries on the northeast side drain into Russell Branch.

Under the *Clean Water Act* (CWA), states are required to record the condition of surface waters in their respective jurisdictions by Section 305(b) and Section 303(d) documentation. The Section 305(b) documentation serves to evaluate the extent to which surface waters are supporting their designated uses for categories such as drinking water supply, aquatic life uses, contact recreation, and fish consumption. TDEC conducts water quality assessments, with last one completed for these sub-watershed units in 2012.

Based on this information, Russell Branch was not supporting current uses due to Polychlorinated biphenyls (PCBs) and sedimentation/siltation from storm sewer systems.[48] Lackey Creek was not assessed in 2012.

The Section 303(d) documentation is a comprehensive list of impaired water bodies that do not support their designated use classifications. TDEC develops this priority list of water bodies, which includes those that do not meet state water quality standards after the application of required controls for point and non-point source pollutants, as well as priority water bodies to which the TDEC can direct its attention when developing required controls such as Total Maximum Daily Loads (TMDLs). Russell Branch was

[47] Orville Lloyd, Jr., and William L. Lyke, U.S. Geological Survey, *Ground Water Atlas of the United States: Illinois, Indiana, Kentucky, Ohio, Tennessee*, "Valley and Ridge Aquifers." Publication HA 730-K, 1995, http://pubs.usgs.gov/ha/ha730/ch_k/K-text4.html (October 25, 2013).
[48] Tennessee OIR-GIS Services, "TDEC Online Water Resources Map," http://tnmap.tn.gov/wpc/ (October 25, 2013).

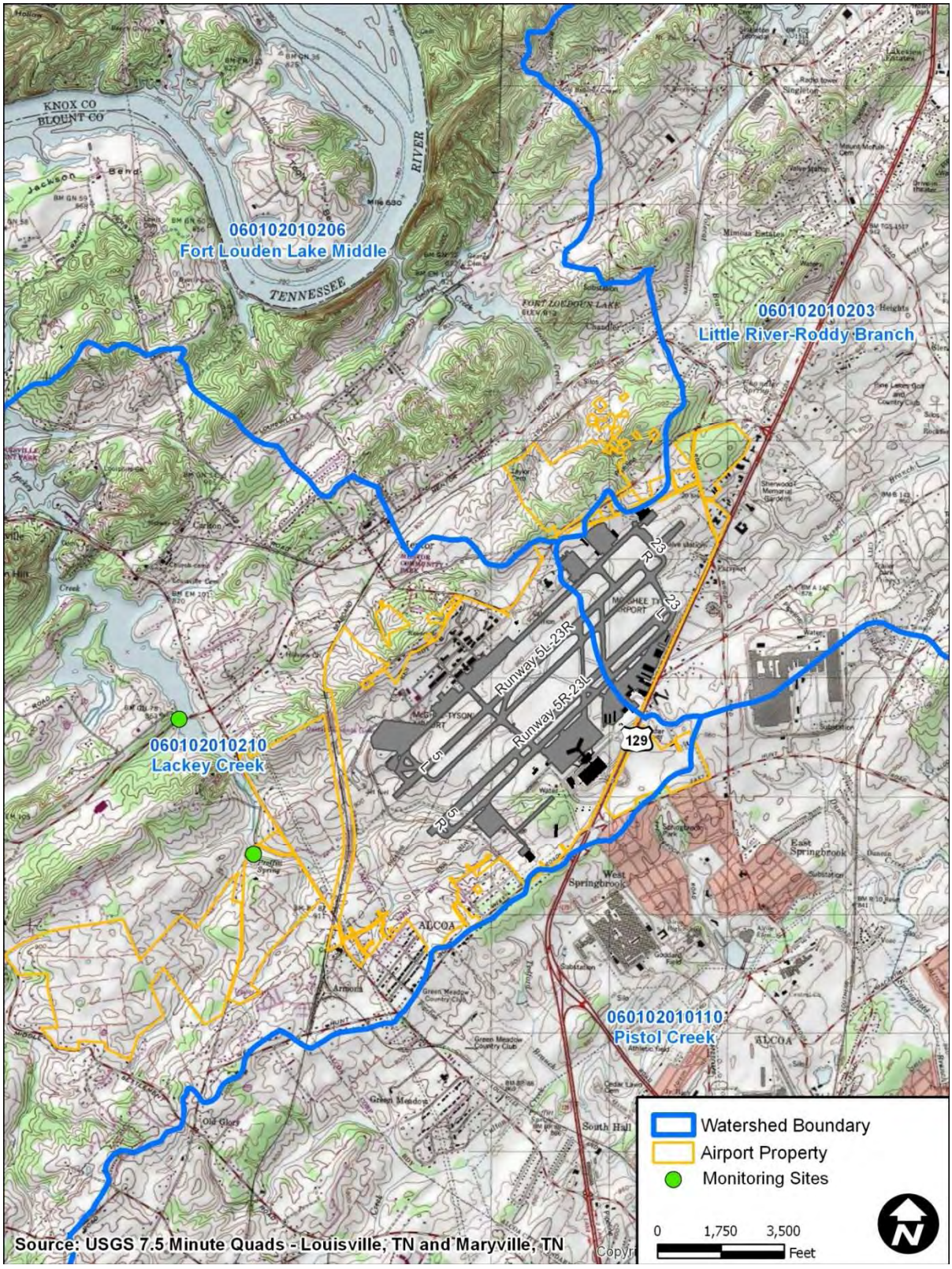

Figure 3-10: Watersheds

listed on the 2012 Section 303(d) list due to the aforementioned PCBs and sedimentation and siltation. A TMDL has been approved for Russell Branch to address the siltation problem of this sub-watershed unit.

Based on this information, Russell Branch was not supporting current uses due to Polychlorinated biphenyls (PCBs) and sedimentation/siltation from storm sewer systems.[49] Lackey Creek was not assessed in 2012.

The Section 303(d) documentation is a comprehensive list of impaired water bodies that do not support their designated use classifications. TDEC develops this priority list of water bodies, which includes those that do not meet state water quality standards after the application of required controls for point and non-point source pollutants, as well as priority water bodies to which the TDEC can direct its attention when developing required controls such as Total Maximum Daily Loads (TMDLs). Russell Branch was listed on the 2012 Section 303(d) list due to the aforementioned PCBs and sedimentation and siltation. A TMDL has been approved for Russell Branch to address the siltation problem of this sub-watershed unit.

Stormwater at the Airport is managed in accordance with the Stormwater Pollution Prevention Plan (SWPPP),[50] which was completed in August 2010. The stormwater drainage system consists of a graded air operations apron with water drains located on the apron; runway drainage swales; lateral riprap drainage ditches; natural draining topography; and, a sedimentation pond. The majority of storm drains are located on or near the taxiways, the air carrier apron, and near the runway drainage swales. Stormwater is managed through the collection of water into outfalls, and effluent from outfalls 2, 7, 8, 9, 10, and 11 is eventually discharged into unnamed tributaries of Lackey Creek, while effluent from outfalls 1 and 4 flows into unnamed tributaries of Russell Branch. The locations of the outfalls are noted in the SWPPP (Panels 1 through 5). Most of the drainage is directed towards outfall 2 and the sedimentation pond, located to the west of the Runway 5L end, that eventually drains into Lackey Creek. The Airport has received a Notice of Intent coverage for stormwater drainage from the TDEC under the Tennessee Multi-Sector Permit. This permit, which covers non-point source stormwater discharges under the National Pollutant Discharge Elimination System (NPDES) program, expires on May 14, 2014 (Appendix F of SWPPP).

3.8.1.C Wastewater

All sanitary sewers discharge to the City of Alcoa municipal wastewater treatment facility. Effluent from floor drains may go through an oil/water separator prior to entering the sanitary sewer.

[49] Tennessee OIR-GIS Services, "TDEC Online Water Resources Map," http://tnmap.tn.gov/wpc/ (October 25, 2013).
[50] Ensafe, Spill Prevention, Control and Countermeasure Plan and Stormwater Pollution Prevention Plan, Mcghee Tyson Airport, August 2010, prepared for MKAA.

3.8.2 Environmental Consequences

3.8.2.A Groundwater Resources

Due to its elevation, it is unlikely that any groundwater aquifers or recharge areas are located in the project area. Therefore, no impacts are anticipated to groundwater resources as a result of the Proposed Action.

3.8.2.B Surface Water Resources

Due to the amount of disturbance being greater than one acre, the proposed project would need to file a notice of intent for coverage with the TDEC for coverage under the Tennessee Construction General Permit. As part of this notice of intent, a specific SWPPP would have to be developed defining the erosion and sediment control measures that would be in place during construction. The notice of intent and SWPPP would have to be approved by TDEC prior to any land disturbing activities. Once the project is completed, the Airport's overall SWPPP would need to be updated to reflect the changes in drainage that were made during construction.

While construction of the proposed project could likely add to the impairment of siltation/sedimentation in Russell Branch, with the proper erosion and sediment control measures in place, the proposed project is not likely to add to that impairment. Post-construction stormwater controls would be modified based on the proposed project, and those would also limit the amount of sedimentation/siltation runoff from the Airport.

3.8.2.C Wastewater

Based on the type of improvements from the proposed project, the amount of wastewater entering into sanitary sewers is not likely to increase. Any additional increases would be coordinated with the City of Alcoa.

3.9 WETLANDS AND OTHER WATERS OF THE UNITED STATES

Executive Order 11990, *Protection of Wetlands*, mandates that each federal agency take action to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural values. To comply with this Executive Order and the *Clean Water Act of 1977* (CWA), the presence of wetlands and other jurisdictional waters of the United States was evaluated within the project area.

3.9.1 Existing Conditions

There are no National Wetland Inventory (NWI)-mapped wetlands located in the vicinity of the Proposed Action. Review of the 1988 *Extension to Runway 5R/23L Environmental Assessment* indicates that an unnamed tributary to Lackey Creek previously existed in the vicinity of the Proposed Action. This jurisdictional water of the U.S. was filled or otherwise relocated in accordance with a previously issued Section 404 permit as part of the runway extension project. As documented during the May 22, 2013, site visit, stormwater runoff in the southwestern portion of the Airport currently flows through a

system of concrete and/or rip-rap lined ditches to an outfall at the Airport perimeter road (Ambrose Street) and a large constructed detention basin located between the perimeter road and the CSX Railroad.

3.9.2 Environmental Consequences

The Proposed Action would not impact jurisdictional waters of the U.S. The U.S. Fish and Wildlife Service (USFWS) indicated that no significant impacts to wetlands are anticipated (Appendix D). As discussed in Chapter 4, the U.S. Army Corps of Engineers (USACE) indicated that if any work was to be performed in waters of the United States, a jurisdictional determination would need to be submitted to the USACE for verification and that a Clean Water Act Section 404 permit would be required prior to construction.

3.10 FEDERALLY PROTECTED SPECIES

3.10.1 Existing Conditions

Pursuant to Section 7 of the *Endangered Species Act of 1973*, the *Bald and Golden Eagle Protection Act of 1940*, and the *Magnuson-Stevens Fishery Conservation and Management Act of 1976*, as amended, the potential presence of federally protected species or suitable habitat for these species within the project area was investigated. Based on the USFWS's Information, Planning, and Conservation System (IPAC), there are 17 species of concern that could occur in the vicinity of the proposed project, such as downstream on Lackey Creek (refer to Table 3.6). In addition, although no longer protected under the *Endangered Species Act*, the bald eagle remains protected under the *Bald and Golden Eagle Protection Act* and is discussed below.

A literature search was performed to obtain descriptions of the species listed in Table 3.6 and their habitat requirements to facilitate identification of the species or suitable habitat during the site visit on May 22, 2013. Sources of information included USFWS Recovery Plans, data from the TDEC, Division of Natural Areas (TNDNA)[51] and other published technical reports. In addition, aerial photography and soil survey mapping were reviewed to identify potential areas of suitable habitat for these species. The online TNDNA Interactive Rare Species Database for Environmental Review was used to obtain occurrence for the aforementioned federally protected species within the project area by county, USGS Topographic Quadrangle and 12 digit HUC watersheds.[52]

[51] Tennessee Department of Environment and Conservation, http://www.tennessee.gov/environment/natural-areas/natural-heritage-inventory-program.shtml (October 30, 2013).
[52] Tennessee Department of Environment and Conservation, Interactive Rare Species Database, http://environment-online.state.tn.us:8080/pls/enf_reports/f?p=9014:4:503812332365301::NO (October 30, 2013).

Table 3.6
Federally Protected Species Known to Occur or Possibly Occur in Blount County, Tennessee

COMMON NAME	SCIENTIFIC NAME	FEDERAL STATUS
Birds		
Bald eagle	*Haliaeetus leucocephalus*	Protected under BGEPA[a]
Clams		
Dromedary pearlymussel	*Dromus dromus*	Endangered
Fanshell	*Cyprogenia stegaria*	Endangered
Finerayed pigtoe	*Fusconaia cuneolus*	Endangered
Orangefoot pimpleback	*Plethobasus cooperianus*	Endangered
Pink mucket	*Lampsilis abrupta*	Endangered
Ring pink	*Obovaria retusa*	Endangered
Rough pigtoe	*Pleuroblema plenum*	Endangered
Sheepnose mussell	*Plethobasus cyphyus*	Endangered
Tubercled blossom	*Epioblasma torulosa torulosa*	Endangered
Fishes		
Duskytail darter	*Etheostoma percnurum*	Endangered
Laurel dace	*Chrosomus saylori*	Endangered
Marbled darter	*Etheostoma marmorpinnum*	Endangered
Snail darter	*Percina tanasi*	Threatened
Spotfin chub	*Erimonax monachus*	Threatened
Flowering Plants		
Spreading avens	*Geum radiatum*	Endangered
Virginia spiraea	*Spiraea virginiana*	Threatened
Mammals		
Gray bat	*Myotis grisescens*	Endangered
Indiana bat	*Myotis sodalis*	Endangered

SOURCE: USFWS, Information, Planning, and Conservation System (IPAC), http://ecos.fws.gov/ipac/wizard/trustResourceList!prepare.action (October 23, 2013).
[a]*Bald and Golden Eagle Protection Act.*

The USFWS was also consulted regarding the known presence of federally listed endangered or threatened species within the project area. The USFWS indicated that no federally listed endangered or threatened species, or suitable habitat for such species, are known to exist in the project area. A copy of the USFWS response letter is included in Appendix D.

A Wildlife Hazard Assessment (WHA) is currently being finalized for TYS. The WHA included repeated surveys conducted over a 12-month period at 14 on-site locations and 11 off-site locations. Although not the focus of the wildlife surveys conducted for the WHA, no threatened or endangered species were noted during the survey period.[53]

3.10.2 Environmental Consequences

As indicated in Table 3.6, bald eagles are no longer listed as threatened or endangered; however, they are still federally protected by the *Bald and Golden Eagle Protection Act of 1940*. Suitable habitat for the bald eagle is not present within the project area, as no large bodies of water suitable for foraging are located within or near the proposed project. The Tennessee River/Fort Loudoun Lake, which would be suitable foraging habitat, is approximately 2.75 miles away. However, transitional areas for nesting and roosting habitat were not found, and no eagles or nests were observed during field surveys for the WHA. It is anticipated that the Proposed Action would have no effect on the bald eagle.

As discussed previously, land disturbance associated with the Proposed Action would be limited to portions of existing Airport property that are part of the airfield or adjacent mowed/maintained grassed areas that have been previously disturbed. Based on review of the online TNDNA Interactive Rare Species Database, only the gray bat, marbled darter, snail darter, and finerayed pigtoe clam were identified as possibly occurring in the watersheds that encompass the Proposed Action. The gray bat frequents forested areas and utilizes caves for roosting. These habitats would not be impacted by the Proposed Action. The other three species are found in aquatic habitats including moderate flowing large creeks or streams with firm cobble substrates or pools and moderate runs with clean pebble substrates. The Airport property is characterized by concrete and rip-rap lined drainageways and a large detention basin located between Ambrose Street and the CSX Railroad, west of the airfield. As discussed in Section 3.15.3, BMPs will be implemented during construction to ensure that the Proposed Action does not impact water quality downstream of the Airport. Based on the absence of suitable habitat on site and the implementation of BMPs during construction, the Proposed Action would have no effect to federally protected species.

3.11 HAZARDOUS MATERIALS AND WASTE SITES

In general, hazardous materials include substances that, because of their quantity, concentration, physical, chemical, or infectious characteristics, may present substantial danger to public health or welfare, or to the environment, when released or otherwise improperly managed.[54]

[53] Loomacres Wildlife Management, *Wildlife Hazard Assessment of the McGhee Tyson Airport 2012-2013*, Draft Report, October 2013, p. 9.
[54] *Resource Conservation and Recovery Act* (RCRA), Subtitle C, 40 CFR, Part 251.

3.11.1 Existing Conditions

Environmental databases containing information about hazardous sites from multiple regulating state and federal agencies, including the USEPA and the TDEC, were searched to determine the presence of hazardous materials or waste sites in the project area (refer to Appendix E). Sites adjacent to the project area that were identified through the database search are shown in Table 3.7. The TDEC, Knoxville Environmental Field Office indicated that although no records for the McGhee Tyson Airport were found, they do have files for the McGhee Tyson Air National Guard. Based on the records identified for the Air National Guard as part of the database search (refer to Appendix E and Table 3.7), no additional file review was deemed necessary as related to the Proposed Action.

Most of these sites were recorded due to leaking underground storage tanks (LUSTs), that have been closed or are in the process of being closed. The McGhee Tyson Air National Guard site (890 Post Avenue) was identified in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) due to potentially hazardous waste on the site that was reported to the USEPA. This site is located approximately 0.31-mile to the northwest of the project area.

The Tennessee Air National Guard site at 90 Briscoe Drive, 0.32-mile northwest of the project area, was identified in the US_Hist_Cleaners database, as potentially having dry cleaning services at the location in the past.

The UPS Site on 2085 Airbase Road is listed as a conditionally exempt small quantity hazardous materials generator in the Federal RCRA generators list. The project area is located 0.27-mile east of this site.

National Car Rental and Hertz Rent-a-car are located along Alcoa Highway. Both were identified in the LUST TRUST database, as having previous accidental releases of petroleum and being eligible for reimbursement from the Tennessee Petroleum UST Fund. However, it is unknown if these sites have been cleaned and closed.

Petroleum products are stored on Airport property in aboveground and underground storage tanks, drums, and other chemical and oil-containing equipment. The full inventory of these locations can be found in the Airport's Integrated SPCC/SWPPP Plan,[55] in Table III-2 (Refer to Appendix F), along with the potential of release and likelihood of contact with storm water. Those location of these sites are depicted on Panels 1 to 5, also in Appendix F. As noted in this table, there have been no past significant spills or leaks. Electrical transformers containing oil have also been inventoried as part of the Integrated SPCC/SWPPP Plan, and are listed in Table III-3.

[55] Ensafe, *Spill Prevention, Control, and Countermeasure Plan and Storm Water Pollution Prevention Plan, McGhee Tyson Airport,* prepared for Metropolitan Knoxville Airport Authority, August 2010.

Table 3.7
Hazardous Material/Waste Sites

SITE	LOCATION	DATABASES	PROXIMITY TO PROJECT AREA
McGhee Tyson Air National Guard	320 Post Avenue	CERCLIS	0.31-mile northwest
UPS	2085 Airbase Road	Federal RCRA	0.27-mile northwest
Tennessee Air National Guard	420 Post Road	LUST – Current status is closed.	0.32-mile northwest
Tennessee Air National Guard	90 Briscoe Drive	LUST – Current Status is closed; UST; US_Hist_Cleaner.	0.30-mile northwest
Cherokee Aviation Inc.	2285 Alcoa Highway	LUST – Closed, LUST/TRUST.	0.76-mile northeast
Knox-Air Inc.	2221 Alcoa Highway	LUST – Closed, LUST/TRUST.	0.73-mile northeast
Budget Rent-a-car	2212 Alcoa Highway	LUST – Tank closure completed, case closed.	0.73-mile northeast
Aluminum Co. of America	2300 North Wright Road	LUST- closed.	0.50-mile east
EZ Food Stop Mart #12	2768 Alcoa Highway	LUST – closed, LUST/TRUST.	0.72-mile northeast
Farrport Market	2777 Alcoa Highway	LUST – Tank closure completed.	0.10-mile northeast
Knoxville Airport Hilton	2001 Alcoa Highway	LUST – Tank closure completed.	0.30-mile east
Hertz Rent A Car	2855 Alcoa Highway	LUST/TRUST.	0.10-mile east
National Car Rental	2055 Alcoa Highway	LUST/TRUST.	0.72-mile northeast
Mr. Gas Market #20	2670 Alcoa Highway	UST.	0.70-mile northeast
Global Motors	2284 Alcoa Highway	UST – Permanently out of use.	0.76-mile northeast

SOURCE: EDR Database Search, September 19, 2013.
NOTES: CERCLIS – Comprehensive Environmental Response, Compensation and Liability Information System Database Federal RCRA – Federal Resource Conservation and Recovery Act; site that may generate, transport, store, treat and/or dispose of hazardous waste. LUST – Sites with Leaking Underground Storage Tanks. LUST/TRUST – Sites with Leaking Underground Storage Tanks that may be eligible for reimbursement from the TN Petroleum Underground Storage Tank Fund. UST– Listed Underground Storage Tanks. US_Hist_Cleaner – historically may have had dry cleaning services.

3.11.2 Environmental Consequences

The No-build Alternative would not affect any known hazardous materials and waste sites.

As shown in Table 3.7, most of the identified sites have been cleaned and closed, and thus should pose no further risk. Of the identified potentially hazardous material sites, all are located outside of the project area. The closest identified site, Hertz Rent A Car, is located to the east of Alcoa Highway, and is approximately 0.10-mile from where the

proposed grading would occur for the localizer on the approach to Runway 23L. However, the graded area for the proposed localizer is at a higher elevation than Hertz Rent A Car. Therefore, it is likely that any groundwater/soil contamination from this site would not travel upgradient to the area proposed to be graded. In addition, a cursory site visit by the design team revealed that a platform may be required to get the localizer on grade at this location; therefore, ground disturbance may not be necessary.

The Airport property has numerous chemical and petroleum storage facilities (refer to Appendix F), as well as oil-containing electrical transformers. Based on the location of these facilities, as depicted on Panels 1 to 5, the only potential conflict would be a 1,000 gallon aboveground storage tank (AST) owned by the FAA, located in close proximity to the Runway 5L end. Due to its location, it may need to be relocated, and would be done according to state and federal standards. If electrical transformers need to be relocated as part of the project, those would be relocated in coordination with the local utility company and safeguards would be in place to prevent spills of oils or other contaminants.

It is possible that previously unknown hazardous materials or waste sites are located within the project area. If potentially hazardous substances are encountered during construction, contaminated soil or other hazardous materials would be tested and removed and/or treated in accordance with USEPA and TDEC requirements.

The Airport's SPCC Plan addresses the accidental releases of fluids from equipment. Should this occur during construction, the SPCC Plan procedures would be implemented.

3.12 ENERGY SUPPLY AND NATURAL RESOURCES

Energy supply requirements for the proposed project fall into two categories: those relating to changing demand from stationary facilities that could exceed local supplies or capacities, and those that involve the increased movement of aircraft and ground vehicles to the extent that the demand exceeds available energy supplies. The No-build Alternative would not change the energy supply requirements at the Airport. The Proposed Action would not change demand from stationary facilities; however, the during the two phases of construction (minimal crack sealing and improvements to Runway 5R-23L in 2014 and the reconstruction of Runway 5L-23R in 2015), various Airport users (air carrier, GA, military, and air cargo) would have to temporarily taxi farther to reach the open runway than is typical (existing and 2016). This may slightly increase fuel consumption at the Airport, but not by a significant amount. This increase would not cause a shortage in fuel in the local or regional areas and would only be during construction.

In addition, consumable natural resources to be used for construction of the proposed project would not be considered scarce or unusual. Sources of construction materials needed for the proposed project are available locally and regionally, and would not cause an undue demand on supplies in the area.

The Proposed Action would result in a significant amount of pavement removal. The TNANG and MKAA have indicated that the demolished pavements could be recycled and used elsewhere at the Airport.[56]

3.13 LIGHT EMISSIONS/VISUAL EFFECTS

3.13.1 Existing Conditions

The McGhee Tyson Airport airfield lighting and NAVAID System (refer to Table 1.1, page 1-6) currently consists of the following:

- High Intensity Runway Lights (HIRLs) along the edge of both Runways 5L-23R and 5R-23L;
- Runway Centerline Lights on both Runways 5L-23R and 5R-23L;
- Touchdown Zone (TDZ) Lights on two runway ends (23R and 5R);
- Precision Approach Path Indicators (PAPI) on both ends of Runway 5R-23L;
- Visual Approach Slope Indicators (VASI) on both ends of Runway 5L-23R;
- Medium-Intensity Approach Lighting System with Runway Alignment (MALSR) Indicator on Runway 5L;
- High Intensity Approach Lighting System with Sequenced Flashing Lights in Category II configuration (ALSF-2) on Runway 23R;
- Runway End Identifier Lights (REILs) on both ends of Runway 5R-23L;
- Category I Instrument Landing System (ILS) on Runway 5L;
- Category II ILS on Runway 23R;
- GPS Precision Approaches (Wide Area Augmentation System/Localizer Performance with Vertical Guidance-WAAS/LPV) to both ends of Runway 5R-23L;
- Medium Intensity Taxiway Lights (MITLs) along the edges of the taxiways; and,
- Airfield Signage.

The current visual environment of the Airport's landside facilities is consistent with transportation and light industrial land uses and features a terminal building, ATCT, TNANG facilities, hangars, parking lots, and other light industrial buildings and equipment. While lighting associated with these facilities is confined to Airport property, they are visible to adjacent land uses during nighttime hours. Surrounding commercial, residential, and industrial land uses utilize existing light sources that contribute to the overall nighttime visual environment.

3.13.2 Environmental Consequences

Light emissions from the Airport were evaluated to determine if they would create an annoyance/disturbance to nearby residences or businesses. The No-build Alternative

[56] Meeting with Tennessee National Guard Stakeholders – Summary, November 2, 2010 (refer to Appendix A of EA).

would not require new lighting around the airfield, terminal, apron, or parking areas associated with the Airport. The Proposed Action would add temporary lighting fixtures and replace existing runway lighting as a result of construction. Temporary NAVAIDS (Category I ILS) would be installed on Runway 5R-23L. Following reconstruction of Runway 5L-23R, these temporary systems would be removed. At this planning stage, the proposed ILS is anticipated to be installed on the approach to Runway 5R.

The visual layout of the Airport on the southern side of the property would be temporarily altered under the Proposed Action with the installation of an ILS on Runway 5R-23L for use during reconstruction of Runway 5L-23R. However, similar lighting facilities already exist at TYS and no effects are anticipated to the visual landscape of residences located in the viewshed of the Airport beyond what is already there with the No-build Alternative. The same is true of the additional taxiway lights that would be constructed under the Proposed Action and the proposed upgrade of the existing FAA-ALSF-2 system. Therefore, no visual impacts are anticipated.

3.14 SOLID WASTE

3.14.1 Existing Conditions

- The proposed project was evaluated in terms of its impacts from increased solid waste generation. Three categories of solid waste generation were evaluated, as follows:
- the potential for temporary generation of solid waste due to demolition and construction activities;
- the potential for increased, long-term generation of solid waste due to Airport operations; and,
- the potential for landfills to be operated adjacent to the Airport that accept putrefiable wastes where a bird strike hazard could occur.

The City of Alcoa, under the supervision of the Alcoa, Maryville, and Blount County Solid Waste Authority, operates a solid waste landfill that also includes recycling drop-off services. The Alcoa/Maryville/Blount County Sanitary Landfill is located approximately 5.4 miles southwest of the Airport at 240 Long Powers Road, Friendsville, Tennessee.

3.14.2 Environmental Consequences

Solid waste would be produced during the construction of the Proposed Action, such as pavement removal debris or trash generated by construction workers. This could be disposed of at the Alcoa/Maryville/Blount County Sanitary Landfill, located approximately 5.4 miles southwest of the Airport.[57] It is anticipated that there would be

[57] City of Alcoa, Public Works and Engineering Department, "Landfill Services," http://www.cityofalcoa-tn.gov/content/view/full/654 (October 30, 2013).

ample space available for disposal of land clearing debris and solid waste generated during construction of the proposed project. In addition, the TNANG and MKAA have indicated that the demolished pavements could be recycled and used elsewhere at the Airport.[58]

As presented in the 2013 TAF and Table 1 of Appendix C, moderate growth in aircraft operations at TYS is projected. Therefore, long-term generation of solid waste may also increase, but not to appreciable levels where collection or disposal methods would exceed available capacity.

FAA AC 150/5200-33B, entitled *Hazardous Wildlife Attractants On or Near Airports*, recommends that airports have a separation distance of at least 10,000 feet from landfills accepting putrescible waste, and at least five statute miles between a municipal solid waste landfill and an airport's air operations area to protect approach, departure, and circling airspace.[59] Based on information from the WHA, the Alcoa/Maryville/Blount County Sanitary Landfill is the closest landfill to TYS at approximately 5.4 miles away.[60] Therefore, the potential for attracting potential wildlife into or across approach or departure paths for aircraft would be minimal.

3.15 CONSTRUCTION IMPACTS

The No-build Alternative would not result in construction impacts.

Impacts may be caused by construction of the Proposed Action, which would be temporary in nature and their degree of impact would subside as construction concludes. As discussed below, potential temporary impacts can be successfully mitigated using BMPs and other procedures. Potential temporary construction impacts related to the proposed project were evaluated by their potential to result in adverse impacts to ambient noise levels, air quality, and water quality. Detailed engineering and construction plans would be developed for the proposed project, and would specify procedures to mitigate potential impacts to any of the aforementioned categories. The following descriptions are based on impacts that can typically occur on similar size projects.

3.15.1 Noise Impacts from Construction

Noise impacts during construction are associated with an increase in ambient noise levels from the construction equipment. Typical noise levels generated by different types of construction equipment are presented in Table 3.8. Construction operations are typically broken down into several phases including clearing and grubbing, earthwork, erection,

[58] Meeting with Tennessee National Guard Stakeholders – Summary, November 2, 2010 (refer to Appendix A of EA).
[59] FAA Advisory Circular 150/5200-33B, August 28, 2008, p. 3.
[60] Loomacres Wildlife Management, "Wildlife Hazard Assessment of the McGhee Tyson Airport, 2012-2013," Draft Report, October 2013, p. 26.

paving and finishing. Although these phases can overlap, each has their own noise characteristics and objective.

Table 3.8
Leq Noise Level (dBA) at 50 Feet for Construction Equipment

EQUIPMENT	dBA Leq @ 50 feet
Earth Moving:	
Front Loader	79
Back Hoe	85
Dozer	80
Tractor	80
Scraper	88
Grader	85
Truck	91
Paver	89
Materials Handling:	
Concrete Mixer	85
Concrete Pump	82
Crane	83
Derrick	88
Stationary:	
Pump	76
Generator	78
Compressor	81
Impact:	
Pile Driver	100
Jackhammer	88
Rock Drill	98
Other:	
Saw	78
Vibrator	76

SOURCE: Grant, Charles A. and Reagan, Jerry, A., *Highway Construction Noise: Measurement, Prediction and Mitigation.*

Distance would rapidly attenuate noise, and it is not anticipated that construction would occur close enough to existing residential areas or sensitive receptors to cause disturbances, as the Airport has purchased much of the residential property in close proximity to the airfield as part of its ongoing Noise and Land Use Compatibility Program. However, specific measures could be considered during construction to further reduce noise, including limiting the time of day heavy equipment can be operated, or ensuring that equipment is shut off when not in use.

3.15.2 Air Quality Impacts from Construction

Construction-related air emissions would primarily be associated with the exhaust from heavy equipment (i.e., backhoes, bulldozers, graders, etc.), delivery trucks and

construction worker vehicles getting to and from the site; dust from earthwork/grading and material handling; equipment movement on unpaved areas; and, fugitive emissions from the storage/transfer of raw materials.

Since the project is located in a non-attainment area for the $PM_{2.5}$ standard, and marginal non-attainment for 8-hour ozone standard (2008), an emissions inventory was performed with the USEPA approved NONROAD2008a model to determine if construction activities of the Proposed Action would be below the *de minimis* levels for these non-attainment pollutants (and their precursors) in the project area.

Currently, the worst-year proposed construction equipment and operations is estimated to consist of the types and durations as described in Table 3.9. At this preliminary stage, the operational number, frequency and duration of the equipment that will be used for construction is a best available estimate. Additionally, to provide the conservative worst-case scenario, the highest emission-emitting equipment by type was used for the analysis. Although contract specification documents can recommend or prescribe the types of equipment to be used, the final decision on the type of equipment used will be determined by the contractor.

Table 3.9
Estimated Equipment Type, Quantity and Operations
(Runway 5L-23R Reconstruction (2015), Duration: 12 months, 260 working days)

TYPE	QUANTITY	OPERATIONS ESTIMATE
Demolition:		
Guillotine Pavement Breaker	2	60 days
Cedar Rapids Concrete Crusher	1	60 days
Tri-axle Dump Trucks	12	60 days
CAT 950 Front End Loader	3	60 days
CAT 420 Backhoe	3	60 days
Water Truck	1	60 days
Excavation:		
CAT 825 Compactor	2	60 days
CAT 321 Scraper	2	60 days
CAT D-8 Dozer	2	60 days
CAT 120 Grader	2	60 days
Tri-axle Dump Trucks	4	60 days
Water Truck	2	60 days
Drainage:		
CAT 420 Backhoe	2	45 days
CAT 950 Front End Loader	1	45 days
Tri-axle Dump Truck	3	45 days
Subgrade:		
CAT RM 500 Road Reclaimer	2	60 days
Water Truck	2	60 days

Table 3.9
Estimated Equipment Type, Quantity and Operations
(Runway 5L-23R Reconstruction (2015), Duration: 12 months, 260 working days)

TYPE	QUANTITY	OPERATIONS ESTIMATE
Paving Stabilized Base:		
CAT 1055 Paver	2	60 days
Tri-axle Dump Trucks	6	60 days
Pugmill Plant	1	60 days
Water Truck	2	60 days
Paving Concrete Pavement:		
Aztec Portable Concrete Batch Plant	1	100 days
Wirtgen 850 Slipform Paver	1	100 days
Tri-axle Dump Truck	10	100 days
Paving Bituminous Shoulders:		
CAT 1055 Paver	1	20 days
Pavement Marking and Grooving:		
Truck Mounted Pavement Striper	1	20 days
Truck Mounted Pressure Washer	1	20 days
Vacuum Truck	1	20 days
Runway Grooving Machine	2	20 days

SOURCE: Michael Baker Jr., Inc., 2013.
NOTE: 2015 is the estimated worst-case year. The 2014 schedule is estimated to be 6 months long, 130 working days with less equipment.

Based on the analysis, the annual pollutant totals (and/or their precursors) were well below *de minimis* levels for general conformity, as shown in Table 3.10. The results of the air quality analysis indicate that there would be no adverse impacts as a result of the construction of the Proposed Action. In addition, contractors would be required to maintain their equipment in satisfactory condition to minimize air pollution from exhaust emissions.

Air pollution associated with the creation of airborne particles would be controlled through the use of watering or the application of calcium chloride in accordance with BMPs established as part of the land disturbance permit requirements. Other measures could be considered to further minimize air emissions during construction, including the limiting the idling times of equipment; using cleaner burning or lower emissions fuel in construction equipment; limiting construction activities during high wind periods to minimize fugitive dust generation; reducing vehicle speeds on unpaved haul roads; and, covering material stockpiles.

Table 3.10
Estimated Emissions by Nonattainment Pollutant

POLLUTANT	ALLOWABLE DE MINIMIS LEVEL[a] (Tons Per Year)	CONSTRUCTION EMISSIONS (Total Tons)
$PM_{2.5}$ (Particulate Matter)	Non-attainment Area, 100 tons/year	2.68
NO_x (Nitrogen Oxides) ($PM_{2.5}$ and ozone precursor)	Non-attainment Area, 100 tons/year	38.96
SO_2 (Sulfur Oxides) (as a $PM_{2.5}$ precursor)	Non-attainment Area, 100 tons/year	1.22
VOC (Volatile Organic Compounds) ($PM_{2.5}$ and ozone precursor)	Non-attainment Area, 100 tons/year (outside an ozone transport region)	2.94

SOURCE: Michael Baker, Jr., Inc., 2013.
NOTES: At this stage, the operational number, frequency and duration of the equipment use is a best available estimate. Additionally, to provide a conservative worst-case scenario, the highest emission-emitting equipment by type was used for the analysis. As a result, it is likely that the total predicted emissions will be lower than those shown above. Ultimately, final equipment needs will be determined by the contractor.
[a]40 CFR 93 §153

3.15.3 Water Quality Impacts from Construction

Water turbidity could temporarily increase in drainage ditches during construction and would likely occur when excavated areas are exposed prior to paving or re-vegetation. As part of receiving coverage under the TDEC NPDES general permit for storm water, a SWPPP would have to be developed and implemented for the construction site. Sediment and erosion control measures and BMPs would be in place to minimize sediment transport, such as silt fencing and the use of check dams in ditches to catch sediment. In addition, efforts would be made to schedule construction operations to minimize the exposure of excavated areas and re-vegetate these areas as soon as possible after grading.

Potential water quality impacts resulting from erosion and sedimentation would be controlled in accordance with FAA criteria, through use of BMPs and through permit requirements. Construction activities would comply with FAA Advisory Circular 150/5370-10C entitled *Standards for Specifying Construction of Airports*, specifically Item P-156, *Temporary Air and Water Pollution, Soil Erosion, and Siltation Control.* Given the above procedures, no significant adverse impacts to water quality would be anticipated as a result of the construction phase of the project.

3.16 PERMITS AND CERTIFICATIONS

The No-build Alternative would not require any permits or certifications.

Construction of the Proposed Action would not be anticipated to result in impacts to jurisdictional waters of the U.S., therefore, authorization under Sections 401 and 404 of the Clean Water Act of 1972 (CWA) would not be required. Should impacts occur to jurisdictional waters of the U.S., coordination with the USACE and TDEC would occur, and the required permits would be obtained prior to construction. The following environmental permits and/or certifications would be needed from local, state, and federal regulatory agencies.

3.16.1 Section 402 of the CWA

Section 402 of the CWA authorizes the USEPA to regulate stormwater discharges. This regulatory authority was delegated to the TDEC. In accordance with the CWA and the Tennessee Water Quality Control Act of 1977, stormwater discharges are regulated through the issuance of NPDES permits. Stormwater runoff and discharges can be sources of water-borne pollutants, which degrade water quality of local streams. Section 402 compliance would be completed prior to construction of the proposed project. This would involve submitting a notice of intent requesting coverage under the Tennessee General Permit No. TNR 100000 for construction activities that disturb one acre or more of land, and developing a SWPPP for implementation during construction. Construction could begin once the TDEC has sent an approval letter stating that the project was covered under the construction general permit (CGP). In addition to approval from the TDEC, Blount County may have more stringent requirements that would also need to be followed during construction.

3.17 INDIRECT AND CUMULATIVE IMPACTS

An analysis of the potential indirect and cumulative impacts from the Proposed Action was completed in accordance with 40 CFR §1508.25(c). The regulations state that indirect and cumulative effects of the Proposed Action should be examined along with the direct impacts. This evaluation considered to the extent reasonable and practical, the potential impacts of the Proposed Action, both on and off the Airport, that are related in terms of time and proximity.

3.17.1 Indirect Impacts

Indirect effects, as defined by 40 CFR §1508.8(b), are caused by the Proposed Action and "are later in time or farther removed in distance, but are still reasonably foreseeable." Although indirect impacts are not directly attributable to the construction and operation of a project, impacts could occur because of induced growth resulting from new or improved facilities.

Based on the FAA Terminal Area Forecast,[61] the operations at TYS are projected to increase by approximately 1.3 percent annually through 2040. This increase in activity

[61] FAA APO Terminal Area Forecast Summary Report, Forecast Issued January 2013.

may require the construction of additional facilities such as aprons, T-hangars, aircraft tie-down parking, or vehicle parking. This could convert undeveloped lands on Airport property to impervious surfaces, which could increase the amount of runoff into surface waters. Prior to new development, proper stormwater controls would be required to be in place to minimize pollutant runoff into nearby surface waters. In addition, NEPA documentation would be prepared for any future facilities, and the required permits (Section 401, 402, and 404) would be obtained prior to construction of these facilities. If increased operations result in the need for additional Airport facilities, future employment opportunities would be created. The increase in operations and aircraft based at the Airport could also result in additional revenue to Blount County through aircraft parking rental fees and fuel sales, as well as travel and tourism to the area.

As discussed in Section 2.3 regarding the No-build Alternative, not addressing the pavement deficiencies on Runway 5L-23R would eventually impact the ability of the TNANG units operating at TYS to fulfill their missions and could also result in reduce service by air cargo carriers. Therefore, the increase in activity that is projected in the 2013 TAF would likely only occur if the pavement deficiencies are corrected on Runway 5L-23R. Otherwise, the Proposed Action is a maintenance project and would not result in induced growth, with the exception of an indirect benefit to the economy of the area through the short-term generation of construction jobs.

3.17.2 Cumulative Impacts

Cumulative impacts are defined by 40 CFR §1508.7 as:

> *the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.*

The FAA's *Environmental Desk Reference for Airport Actions* goes on to describe that the cumulative impact analysis under NEPA requires the FAA to assess a proposed action's direct and indirect impacts on a particular resource to determine if those effects in combination with the effects of other projects on the same resource would be cumulatively significant.[62] Accordingly, the resources of concern relative to the Proposed Action include stormwater runoff and water quality, as well as temporary impacts during construction related to noise and air quality.

With regards to the Airport, development projects completed in the past 10 years at TYS include the new ARFF facility, West Aviation Area, and Airport Maintenance Center west of the terminal building, as well as Taxiway B Reconstruction. Present and reasonably foreseeable projects are listed in Table 3.11. These Capital Improvement Plan

[62] FAA, *Environmental Desk Reference for Airport Actions*, October 2007, Chapter 23, pp. 2 and 3.

(CIP) projects include the Proposed Action, as well as rehabilitation of the detention pond and South Lateral Drainage area, resealing of various airfield pavements, construction of new access roads and airfield pavements, and land acquisition associated with a future third runway.

Table 3.11
Proposed Capital Improvement Program Projects at McGhee Tyson Airport

YEAR	PROJECT
2013-2016	Runway 5L-23R Reconstruction
2015	Detention Pond Rehabilitation
2016	South Lateral Drainage Rehabilitation
2016	Taxiway, Air Carrier Ramp, Air Cargo Ramp Resealing
2016	General Aviation Road Relocation
2017-2023	Land Acquisition for Third Runway
2017	Air Cargo Expansion
2018	Taxiway A Rehabilitation
2018	West Perimeter Road - Construction
2019-2023	Taxiway A Realignment and Fuel Farm Relocation

SOURCE: MKAA, *McGhee Tyson Airport, Airport Capital Improvement Program,* December 2012.
NOTE: Years indicate fiscal year for design and/or construction.

Past residential and commercial development has occurred in the vicinity of the Airport, especially adjacent to Alcoa Highway, Louisville Road, and I-140 (Pellissippi Parkway). As noted in Section 3.4.1, the population of Blount County is expected to increase approximately 5.6 percent between 2013 and 2018; therefore, some land development pressure is projected to occur in the County due to population growth. Based on review of the Knoxville Regional Transportation Planning Organization's (TPO's) Transportation Improvement Plan (TIP)[63] and Long-Range Mobility Plan,[64] there are several roadway improvements planned for Blount County, including Alcoa Parkway (US 129/SR 115). Existing Alcoa Highway provides local business access, is a primary commuting route to/from Knoxville, and provides access to/from TYS. This roadway project would improve safety and capacity issues and involves construction of a new eight-lane (six through lanes and 2 auxiliary lanes), limited access highway located east of the Airport, from north of Hall Road to South Singleton Station. A new interchange with TYS would also be included. The Federal Highway Administration (FHWA) issued a Finding of No Significant Impact (FONSI) for the Alcoa Parkway project on August 8, 2011.

[63] Knoxville Regional Transportation Planning Organization, http://www.knoxtrans.org/plans/tip/tipmap.htm (November 4, 2013).
[64] Knoxville Regional Transportation Planning Organization http://www.knoxtrans.org/plans/mobilityplan/projects/blount.pdf (November 4, 2013).

Potential cumulative impacts to the various resources of concern that could occur as a result of past, present, and reasonably foreseeable future project at TYS or in the vicinity are evaluated in the following sections.

3.17.2.A Noise

TYS has an FAA-approved Noise Compatibility Plan. One component of this Plan is implementation of land use management elements to reduce the incompatible land uses around the Airport and prevent new incompatible development.[65] MKAA works with the City of Alcoa and Blount County to achieve land use compatibility within the airport environs. Blount County currently has zoning in place to restrict not only the height of objects[66] in the vicinity of the Airport, but also new development located within the 65 DNL noise contour.[67] As a result, future new residential developments located within the existing 65 DNL noise contour would not be anticipated.

None of these proposed CIP projects would increase airport capacity or result in additional aircraft operations. While a preliminary step to the construction of an additional runway at TYS, land acquisition for the third runway would eventually have the potential to add airfield capacity; however, this project remains highly uncertain and would be over 20 years away. As capacity additions occur noise analyses would be completed as part of the NEPA documentation for the project to determine impacts.

An updated noise study was completed for the proposed Alcoa Parkway in February 2011. In accordance with FHWA noise standards and Tennessee Department of Transportation (TDOT) policy, a 10 dB increase in design year sound levels over existing sound levels results in an impact. Several areas that were included in the Location Point Analysis for the Proposed Action, were also evaluated for noise impacts related to the proposed new Alcoa Parkway, including residences near Payne Avenue, Belfor Circle, and Mimosa Heights Drive. No impacts were identified in these areas from the roadway project. In addition, construction of Alcoa Parkway would not be constructed prior to 2016 when the Proposed Action would be completed and temporary noise impacts from aviation activity would no longer occur. Therefore, significant increases in cumulative noise levels within the project area are not anticipated.

3.17.2.B Air Quality

As discussed above, none of these proposed CIP projects would increase airport capacity or result in additional aircraft operations. Therefore, air quality impacts would not be anticipated. Based on forecasted data for TYS through the 2030, the annual enplanements and operations are projected to remain below the threshold of 1,300,000

[65] FAA, "Part 150: Records of Approval, McGhee Tyson Airport, Knoxville, Tennessee," January 17, 1997, http://www.faa.gov/airports/environmental/airport_noise/part_150/states/media/roa_tennessee_011797.pdf (November 5, 2013).
[66] *Blount County, Tennessee, Zoning Regulations,* "Airport Hazard Overlay," June 15, 2000, Section 9.8.A, p. 32 http://www.blounttn.org/planning/ZONING%20RESOLUTION%208-06%20update%20print%20version.pdf (October 11, 2013).
[67] *Ibid,* Section 9.8.B, p. 32.

enplanements and 180,000 operations per year;[68] therefore, a NAAQS assessment would not be anticipated. However, similar to the Proposed Action, air quality impacts from construction of the CIP projects would be evaluated.

The Alcoa Parkway project was evaluated regarding transportation conformity and potential air quality impacts. All three segments of the project are included in the Knoxville Regional TPO's TIP or Knoxville Regional Mobility Plan.[69] Therefore, the project conforms to the State Implementation Plan. A $PM_{2.5}$ Hot-Spot Determination was also completed by TDOT and determined that this project is "Not a Project of Air Quality Concern."[70]

Based on the above findings for present projects in the vicinity of the Airport, cumulative impacts to air quality are not anticipated. Future projects would be evaluated in relation to the NAAQS, transportation conformity and construction impacts.

3.17.2.C Greenhouse Gases

Because aviation activity at the McGhee Tyson Airport represents such a small amount of United States and global greenhouse gas emissions (.099 percent), and the related uncertainties involving the assessment of such emissions regionally and globally, the cumulative contribution of the proposed project cannot be adequately assessed given the current state of the science and assessment methodology.[71]

3.17.2.D Water Quality

The Detention Pond Rehabilitation and South lateral Drainage Rehabilitation projects would result in improved stormwater management on-site, and thus, increased water quality. Other proposed CIP projects would add impervious surfaces to Airport property, including construction of the West Perimeter Road and air cargo expansion. This added runoff would be required to be treated through new or existing water retention ponds, which would minimize potential contaminants from impacting the water quality.

Past residential and commercial development has occurred in the vicinity of the Airport, especially adjacent to Alcoa Highway, Louisville Road, and I-140 (Pellissippi Parkway). This development has increased impervious surfaces in the sub-watersheds the Airport is located within. This trend is expected to continue based on the future population growth anticipated for Blount County.

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[68] FAA, *Air Quality Procedures for Civilian Airports and Air Force Bases*, p. 19, http://www.faa.gov/regulations_policies/policy_guidance/envir_policy/airquality_handbook/media/Handbook.PDF (October 30, 2013).

[69] FHWA, Finding of No Significant Impact, SR-115/US-129 (Alcoa Highway) Bypass, Blount County, Tennessee) http://www.tdot.state.tn.us/alcoahwyrelocated/docs/FONSI-Alcoa%20Bypass_SR115_August%208-2011.pdf (November 4, 2013).

[70] *Ibid.*

[71] NEPA Regulations, Council on Environmental Quality, 40 CFR §1502.22, *Incomplete or unavailable information*.

Construction of the Alcoa Parkway and other roadway projects included in the TIP, such as the Pellissippi Parkway Extension and the widening of Alcoa Highway between Singleton Station Road and the Tennessee River,[72] would result in additional impervious surfaces in the vicinity of the Airport, increased stormwater runoff, and potential water quality impacts. Use of water quality protection measures and mitigation measures developed during permitting would help to ensure that water quality conditions in Russell Branch are not worsened.[73]

The Proposed Action and other improvements impacting greater than one acre would need to file a notice of intent for coverage with the TDEC for coverage under the Tennessee Construction General Permit. As part of this notice of intent, a specific SWPPP would have to be developed defining the erosion and sediment control measures that would be in place during construction.

Implementation of various long-term water quality measures and construction BMPs will help to minimize potential cumulative impacts to water quality near the Airport.

[72] Knoxville Regional TPO, Transportation Improvement Program, http://www.knoxtrans.org/plans/tip/tipmap.htm November 4, 2013).
[73] FHWA, Finding of No Significant Impact, SR-115/US-129 (Alcoa Highway) Bypass, Blount County, Tennessee) http://www.tdot.state.tn.us/alcoahwyrelocated/docs/FONSI-Alcoa%20Bypass_SR115_August%208-2011.pdf (November 4, 2013).

Chapter 4
Agency Coordination and Public Involvement

CHAPTER 4: AGENCY COORDINATION AND PUBLIC INVOLVEMENT

4.1 AGENCY COORDINATION

The following agencies and organizations have received correspondence regarding the Proposed Action during the early coordination process and/or additional clearance coordination:

- USACE;
- USFWS;
- USEPA, Region IV, Office of Environmental Assessment;
- TDEC, Tennessee Historical Society;
- TDEC, Knoxville Environmental Field Office, State Natural Areas Management;
- TDEC, Knoxville Environmental Field Office, Water Resources Manager; and,
- Blount County Planning Department.

Coordination with these agencies is summarized below and all correspondence letters are included in Appendix D.

The USACE indicated that if any work was to be performed in waters of the United States, a jurisdictional determination would need to be submitted to the USACE for verification and that a Clean Water Act Section 404 permit would be required prior to construction.

The USFWS indicated that there were no federally listed endangered or threatened species, or habitat suitable for such species, known to exist in the project area. They also commented that no significant impacts to wetlands are anticipated as a result of the Proposed Action.

The USEPA provided scoping comments in accordance with Section 102(2)(c) of the *National Environmental Policy Act* and Section 309 of the *Clean Air Act* and requested a copy of the Draft EA when it becomes available for review. The initial concerns cited by the USEPA included potential wetland impacts and mitigation, as well as the evaluation of potential socioeconomic and health related impacts to environmental justice populations.

Pursuant to Section 106 of the *National Historic Preservation Act of 1966*, the Tennessee Historical Commission, State Historic Preservation Officer (SHPO) requested additional information regarding the Proposed Action, including numbered photographs of the general area and the project site, along with a corresponding key map. This additional information was provided and the SHPO responded with a letter stating that the proposed project will not adversely affect any property that is eligible for listing in the NRHP (refer to Appendix D).

The TDEC, Knoxville Environmental Field Office indicated that although no records for the McGhee Tyson Airport were found, they do have files for the McGhee Tyson Air National Guard. Based on the records identified for the Air National Guard as part of the Hazardous Materials Database Search (refer to Appendix E), no additional file review was deemed necessary as related to the Proposed Action.

4.2 PUBLIC INVOLVEMENT

The Draft EA will be available for review and comment by the public on the Airport's website (http://www.tys.org/tys/work-with-the-airport/mcghee-tyson-airport-documents/), at the Airport, and in the Blount County Public Library in Maryville, Tennessee, for thirty days after it is approved by the FAA. The Notice of Availability of the Draft EA and the Opportunity to Request a Public Hearing will be advertised in the local *Knoxville News Sentinel* newspaper.

Chapter 5

List of Preparers

CHAPTER 5: LIST OF PREPARERS

5.1 FEDERAL AVIATION ADMINISTRATION

Stephen Wilson, Environmental Program Manager, participated in stakeholder meetings, provided input throughout the project, and responsible for review of Environmental Assessment.

James Williams, Program Manager, provided input on the Proposed Action and the Environmental Assessment.

Mike Thompson, Program Manager, participated in stakeholder meetings and provided input on the Proposed Action.

5.2 METROPOLITAN KNOXVILLE AIRPORT AUTHORITY

Bryan White, P.E., Vice President of Engineering and Planning, provided input and direction on goals for the Airport facility in regards to the Environmental Assessment.

Eric Williamson, Project Manager, provided input and Airport information throughout the project and responsible for review of the Environmental Assessment.

Blake Sartin, GIS Specialist, provided previous project files and information from the Airport's GIS database.

5.3 MICHAEL BAKER JR., INC.

Mike Reiter, P.E., Operations Manager, responsible for technical input and review of the Environmental Assessment.

Jeff Pike, P.E., Operations Manager, responsible for project management, technical input, and review of the Environmental Assessment.

Laura Stevens, Environmental Specialist II, principal author of the Environmental Assessment.

Michelle Herrell, Project Manager, responsible for writing the hazardous materials and water quality sections of the Environmental Assessment and for review of the document.

Troy McNall, Senior Aviation Designer, provided technical input, assisted with the noise analysis, and responsible for preparation of Environmental Assessment graphics.

Jim Duguay, Project Manager, responsible for completion of the noise analysis and provided technical input.

Andy Kuchta, Air Quality and Noise Technical Manager, responsible for conducting the air quality analysis.

Mike Kotlow, Senior Aviation Planner**,** assisted with the noise analysis.

Jim Hall, P.E., Technical Manager, provided technical input for Chapters 1 and 2 of the Environmental Assessment.

APPENDICES

Appendix A

Runway Reconstruction-Programming and Development Plan Report

McGhee Tyson Airport

Runway Reconstruction – Programming and Development Plan Report

Prepared for:

Metropolitan Knoxville Airport Authority

MAY, 2013

Michael Baker, Jr.
Knoxville, Tennessee

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Section 1: Introduction

In February, 2009, The Metropolitan Knoxville Airport Authority (**MKAA**) contracted with The LPA GROUP Inc., A Unit of Michael Baker Corporation (**CONSULTANT**) to provide design, bid, and construction phase professional services to rehabilitate the pavement of Runway 5L-23R as well as widen the runway's shoulders at the McGhee Tyson Airport (Page 2, **Figure 1**). The anticipated work items consisted of selective slab replacement, new paved shoulders, and an upgrade of the existing edge and centerline lighting system.

Early in the design process, after a detailed pavement survey that identified damaged slabs as well as an analysis of the design field survey, several unforeseen issues with the runway were identified. First, the amount of damaged slabs that required replacement or repair measures was greater than initially estimated. The CONSULTANT calculated that over 65% of the Runway 5L-23R concrete slabs were in need of replacement as shown in **Figure 4** (Appendix A). Second, the field survey uncovered longitudinal as well as cross slope grades that exceed current FAA requirements. Longitudinally, the survey revealed inadequate Line of Sight (LOS), which when in compliance, allows typical aircraft pilots the ability to see other aircraft or obstacles within 1/2 of the length of runway, 5 feet above the surface at any point on the runway. As **Figure 5** (Appendix A) illustrates, a crest vertical curve between Stations 58+00 and 90+00 exists that adversely affects the LOS criteria as established in FAA guidance contained in Advisory Circular 150/5300-13 *Airport Design*.

After working with the MKAA staff to adequately document the issues, the 2009 design contract was closed. A new planning and programming effort was devised that would explore the costs, implications and potential solutions to addressing the identified issues. This report is the result of those planning and programming efforts.

The planning and programming effort referenced above, initiated in May, 2010, began with the design team's most important conclusion of the 2009 preliminary design: *That Runway 5L-23R should be totally reconstructed*. With this starting point, the team set out to analyze the cost and implications of interrupting service to the airport's only runway equipped with an Instrument Landing System (ILS).

Section 2: Stakeholder Input

With the recognition that any reconstruction of the primary ILS Runway 5L-23R would require a period of shutdown, it was determined that a stakeholder group needed to be identified, and consulted with during the programming phase. By consulting with this group, it allowed the design team to consider the potential issues of the program from

McGhee Tyson Airport
Runway Reconstruction
Programming and Development Report

Location Map

Figure 1

operational and customer service points of view. The stakeholders as defined by this study were the following:

- MKAA Staff
- FAA Air Traffic Control Tower (ATCT)
- FAA Airports District Office (ADO)
- FAA National Airspace (NAS) Planning
- Tennessee Aeronautics Division (TAD)
- McGhee Tyson Airport Users Group:
    - Tennessee Air National Guard (TNANG)
    - Commercial Airlines (US Air, Delta, United, Allegiant, American, AirTran)
    - Air Cargo (UPS, FedEx)
    - General Aviation FBO (TAC Air)

A series of meetings (both project specific meetings or regularly scheduled tenant meetings) were then conducted to gather information and solicit the opinions of these various stakeholders. For the project specific meetings, minutes were kept, and can be found in Appendix B. The following sections summarize the content and conclusions of these meetings.

2.1 Design Team Kickoff Meeting (June 24, 2010)

The initial meeting of the design team (CONSULTANT and MKAA Staff) to kickoff the programming effort was held on June 24, 2010. The meeting covered several topics, but the main emphasis was on:

1) Project Team Roles
2) Data Gathering and Sharing
3) Potential Project Issues

The team roles and stakeholders were defined and lines of communication were established and can be found in the official minutes in Appendix B, page B-1. As the team prepared for the stakeholder meetings and the analysis of airfield impacts for the program, several topics emerged as critical path issues that would need to be investigated:

- Is it feasible to establish a temporary or permanent Instrument Landing System (ILS) on Runway 5R-23L while Runway 5L-23R is being constructed?
- What, if any airspace obstructions may adversely affect the establishment of an ILS on Runway 5R-23L?

- If all operations are temporarily moved to Runway 5R-23L during the reconstruction of Runway 5L-23R, how will traffic be routed and phased within the taxiway system, and what improvements may be needed to these pavements to handle the additional traffic?
- Will the less than standard separation of Taxiway A to Runway 5R-23L require the taxiway to be relocated in order to install the ILS?

With these fundamental questions as the starting point of the study, the team set out to gather input from stakeholders and conduct a programming analysis that would answer these questions, and any others that would arise through the individual meetings.

2.2 FAA Joint Planning Conference (July 27, 2010)

On July 27, 2010, a joint planning conference was held with the FAA ADO and the MKAA staff. As is customary, MKAA invited the entire users group identified at the beginning of this section. The final attendance and detailed notes of all the topics covered in the gathering can be found in Appendix B, page B-6. However, given the scale and importance of the Runway 5L-23R Reconstruction Program, discussions relating to this project covered much of the meeting. While funding the program was the main topic of discussion, other issues and concerns were covered and the summarized list of these follows:

1) FAA Funding – With the on-going Airport Maintenance Center (AMC) Project and MKAA's desire to move forward with the Runway Program, MKAA entitlement grants are likely obligated for the next 5-10 years. It is the intent of MKAA to compete for discretionary funds. Given the annual limitations for discretionary spending ($7M-$10M range), the program would likely require a multi-year grant and phased construction projects.
2) Project Justification – The CONSULTANT gave a PowerPoint presentation that outlined the Runway 5L-23R condition. It was further discussed that while the current pavement was not in imminent danger of failing, due to its age (30+ years) and increased maintenance required in recent years, the proactive step of reconstruction will ensure major pavement failures are avoided in the foreseeable future. It was also noted that a recent nearby taxiway project revealed a subgrade very sensitive to moisture, and that the nature of the Runway 5L-23R cracking could soon expose similarly unstable subsoil if water infiltration continues.
3) TNANG Funding – Representatives from TNANG stated an interest in extending Runway 5L-23R 1,000' (500' in each direction) to accommodate a future fleet change that included a new tanker aircraft. TNANG acknowledged any efforts to

extend the takeoff length on Runway 5L-23R would need Department of Defense funds, as the FAA AIP program only contributes grant money towards civilian aircraft usage. Further, there was recognition that maintenance for any extension to the runway would be performed by MKAA Operations, and a modification to the existing operating agreement between MKAA and TNANG would need to be prepared and executed.

4) Schedule – The timetable to administer the funds and construct the projects was discussed in general terms. While some engineering design may begin within the year, construction isn't likely begin for around 5 years (from the date of the 2010 meeting, projecting to 2015). As alluded to earlier, due to the projected costs, a multi-year program will be needed that could extend 2-4 years.
5) ILS Feasibility – Representatives from the FAA indicated that a determination on the feasibility of installing an ILS on Runway 5R-23L needed to be a top priority. Data pertaining to this, as well as that relating to Taxiway A separation to Runway 5R-23L, needed to be forwarded to the FAA so that they could begin routing information to the proper channels.
6) Environmental Assessments – It was acknowledged by all present that the project(s) being proposed would require any environmental issues to be addressed with the appropriate contacts within the FAA.

2.3 FAA NAS Planning Meeting (August 10, 2010)

The above referenced meeting in August 2010 was held to further coordinate with the FAA NAS Planning office in regards to the Runway Program's implications on current and future Navigational Aids (NAVAIDS) at McGhee Tyson Airport. In particular, the FAA has plans to upgrade the existing Approach Lighting System (ALS) on the Runway 23R end with a new ALSAF-2 (ALS with Sequenced Flashers) System. The minutes to this meeting are provided in Appendix B (page B-12), however, the major items of discussion can be summarized as follows:

1) In order for funding scenarios and project schedules of the Runway 5L-23R Reconstruction and the proposed new ALSAF-2 system to be synchronized, close coordination is going to be required between the MKAA and the FAA as the planning process moves forward. As of the date of the meeting, no construction schedule for the system was in place.
2) The current order of magnitude cost estimate for the ALSAF-2 installation is $3M dollars as provided by the FAA NAS Planning office.
3) The FAA representative indicated a commitment to a general schedule for the Runway 5L-23R Reconstruction was needed in order for FAA NAS Planning personnel to push for funding on the ALSAF-2 replacement in Washington. Further, this effort to synchronize the two projects will greatly minimize the

potential for any rework in the future, as well as lower the cost of installation if it can be accomplished under one contract.

4) While the existing ILS will not be available for Runway 5L-23R during its reconstruction, it was noted the equipment may be used for an "offset" approach to Runway 5R-23L.
5) Due to the non-standard separation (350') of Taxiway A to Runway 5R-23L, operational procedures were discussed as a possible means to maintain FAA separation standards during construction of the Runway 5L-23R project.

2.4 Air Cargo Stakeholders Meeting (September 30, 2010)

This meeting held in September 2010 brought the design team and the current air cargo tenants together to discuss the program's impact on their operations. The minutes of this meeting can be found on page B-14 of Appendix B, but the discussion can be best summarized below:

1) All Air Cargo representatives indicated unanimously their need to have a functional ILS on Runway 5R-23L in order to maintain continuity of their operations during the Runway 5L-23R shutdown.
2) The Air Cargo representatives also raised concerns relating to ground operations during the Runway 5L-23R shutdown period. In particular, the Air Cargo representatives were concerned about the additional taxiing time associated with having to cross Runway 5R/23L in order to access the Runway 5R Threshold for departures. These representatives noted the apparent benefits associated having direct taxiway access to the Runway 5R threshold from Taxiway B1. It was agreed that the feasibility of this direct taxiway access to the Runway 5R threshold from Taxiway B1 would be considered further during the development of a preferred airfield alternative. As the study progressed, and primarily due to costs associated with constructing this proposed taxiway alignment, the concept was ultimately eliminated from the program.
3) There was discussion on which end the ILS would serve (5R end or 23L end), but whichever was decided, Cargo representatives relayed a strong desire for the system to meet Category II standards.

2.5 FAA Air Traffic Control Tower (ATCT) Meeting (October 1, 2010)

In October 2010, the design team met with FAA air traffic control staff in order to solicit their input on the proposed project(s) as it related to procedures and direction that will be given to pilots during the construction phases. The meeting minutes in their entirety

can be found on page B-16 of Appendix B, but the highlights of the discussion can be summarized as follows:

1) The Runway 5L-23R project will likely be a test bed for the new FAA Order 5200.11 relating to Safety Management Systems (SMS). This integrated safety policy would aim to provide a consistent means of assessing safety risk. While the requirement to comply with Order 5200.11 does not have a present start date, it was assumed by the ATCT representatives that compliance with the order will likely be expected due to the size and scope of the Runway Program.
2) ATCT confirmed that operating the airfield from their perspective would prove to be very difficult without a functional ILS.
3) The issue of utilizing the existing GPS approach on Runway 5R-23L in lieu of installing an ILS was discussed. However, MKAA staff confirmed that the airlines are not equipped to utilize the GPS, nor are there any immediate plans to change navigational equipment within their fleet.
4) It was noted that the current 1,400' separation between Runway 5L-23R and Runway 5R-23L was insufficient to allow for simultaneous approaches. This factor needed to be accounted for as the Runway 5R-23L ILS options are explored.
5) Possible taxiway reconfiguration was discussed at length as the design team solicited ATCT opinion on the current layout as well as various proposed taxiway locations. ATCT provided locations within the airfield considered "hot spots", which are areas where incursions are most likely to occur. This information would be used by the design team as future airfield layout configurations were developed and vetted.

2.6 Tennessee Air National Guard (TNANG) Meeting (November 2, 2010)

A separate meeting was scheduled and held in November 2010 with the largest tenant of the airport, the Tennessee Air National Guard. Detailed minutes of the meeting can be found on page B-18 of Appendix B. The following list summarizes the content of the meeting:

1) As with other airport users, the TNANG personnel indicated an ILS was essential to maintaining their normal operations. Due to the readiness requirements of their mission, if an ILS was unavailable to them during the Runway 5L-23R Reconstruction, TNANG would be forced to look into temporary solutions, such as relocating a percentage of their fleet to another base.
2) TNANG related that the current coding of the current RNAV approach is incompatable with the software on their fleet.

3) The team and TNANG discussed access to Runway 5R-23L during the Runway 5L-23R reconstruction period, and TNANG confirmed quick access to Runway 5R-23L would need to be maintained. Again due to the readiness requirement for emergency events, taxiway layout configurations were discussed that would supply the desired quick access. For example, temporarily utilizing the large apron adjacent to Taxiway C to base some military aircraft could be one way to maintain readiness.
4) The issue of allowing full use of parallel Taxiway G for Air Cargo and other users during the phased construction was discussed, with TNANG indicating this would prove very difficult since Taxiway G west of connector Taxiway G5 has security concerns due to its proximity to the TNANG facilities and parked military aircraft.
5) TNANG shared that a new aircraft may be assigned to the base and this would greatly increase their need for extra runway length. The proposal is to lengthen Runway 5L-23R 1,000', extending 500' off of each runway end. Taxiways would need to be routed to the new thresholds as part of any new project. Department of Defense funds may be available for this extension work, and the meeting participants agreed integrating the extension with the Runway 5L-23R Reconstruction program is a favorable scenario for the airport in terms of overall cost and scheduling considerations.
6) TNANG inquired as to the design team's intentions for any demolished runway pavements. MKAA offered that they are always interested in green initiatives, and if a cost effective use for the demolished pavements could be identified, they would endorse such a use for these materials. TNANG stated they may have a use for these demolished pavements.
7) TNANG also stated a dedicated arming/de-arming pad would be useful to them. The design team agreed to consider locations for such a pad as future airfield layouts are developed.

2.7 Airport Tenant Input on Navigational Aids (Various dated Correspondence)

While the project specific meetings summarized in Sections 2.1 through 2.6 were conducted to discuss the Runway Program as a whole, it was deemed prudent by the design team to follow up with the airport's tenants on the focused topic of navigational aids (NAVAIDS). Specifically, what are the current capabilities, as well as the future projected capabilities, of the user fleet mix to utilize the Wide Area Augmentation System (WAAS) GPS based approach to LPV (localizer performance with vertical guidance) minimums? The survey administered by MKAA staff yielded the following results:

- Air Cargo Tenants indicated they do not currently fly GPS-WAAS approaches and have no immediate plans to acquire said capability

- TN Air National Guard (TNANG) indicated that while they currently can fly GPS approaches to LNAV (lateral navigation – non precision) minimums, they do not possess the avionics to utilize the LPV (precision) approach at this time. It was noted they may upgrade the equipment with funds associated with "Block 45", but the timetable for that funding is unknown.
- All of the Airline Tenants indicated they do not possess the capability to utilize the LPV approach, nor do they have plans to update their avionics in the near future.

Based upon this feedback, it was determined that a large portion of the McGhee Tyson fleet mix would be unable to use the GPS-WAAS based approach to precision minimums on existing Runway 5R-23L while the Instrument Landing System (ILS) Runway 5L-23R is shut down for reconstruction. Operationally, what this means is that during inclement weather or low visibility conditions, which are typical at TYS Airport during fall mornings, flights would be delayed or cancelled unless a usable ILS is available on the open runway (5R-23L) while Runway 5L-23R is closed for reconstruction. The loss of operations would have an adverse effect on the tenants and may require some to suspend flights until construction is complete.

Section 3: Airfield Impacts

As the first two sections have indicated, the total reconstruction of Runway 5L-23R will require some extensive grade correction, as well as a shutdown period of the runway during construction. The physical (grading) and operational (runway shutdown) impacts of the project will be far reaching. The following sub-sections outline the major airfield impacts and issues of the Runway 5L-23R Reconstruction.

3.1 Impacts to Runway 5L-23R

The reconstruction of Runway 5L-23R allows the Airport Authority to make additional related improvements around the runway in addition to the pavement surface replacement. The following bullets indicate the most prominent areas where the project's improvements will have the largest effect:

- *Profile and Cross Slope Correction* – As mentioned in the opening section, the longitudinal grade (profile) as it exists does not meet FAA Guidance requirements. Specifically, inadequate Line of Sight (LOS) is available due to a crest vertical curve in Runway 5L-23R between Stations 58+00 and 90+00 as shown on **Figure 5** in Appendix A. A preliminary design exercise revealed that as much as 7 feet of earth may be necessary to remove to grade the Runway 5L-23R profile back into FAA compliance (as illustrated on **Figure 5**). In the same

area, approximately between Stations 70+00 and 80+00, the cross slopes are also non-standard according to FAA guidance. **Figure 6** in Appendix A illustrates how the cross slope becomes steep and in one direction at the sample location of 76+00. This is due to the fact that Taxiways G5/B5 and G6/B6 as they intersect Runway 5L-23R used to be where a cross-wind runway was located. As this old runway was converted to connector taxiways (G5/B5, G6/B6), the grades of the area remained intact. Since the proposal is to reconstruct the entire Runway 5L-23R, the opportunity exists to correct both of these listed grading deficiencies.

- *Taxiway Removal/Replacement* – As a result of the grade correction described above, several taxiways will be impacted. As **Figure 8** in Appendix C illustrates, Taxiways G5, G6, B5 and B6 (north of Taxiway B) would need to be removed since they can no longer tie into the proposed profile as shown on **Figure 5** (Appendix A). Also illustrated in **Figure 8**, and more fully explained in the design memo dated March 2, 2011 (Appendix C, page C-34), a modified high speed taxiway is recommended in place of Taxiways B5 and B6 mentioned above. FAA EB-75 (engineering brief) discourages a parallel taxiway "crossing" at the intersection with a high speed taxiway, and this is one reason Taxiway B5 *south* of Taxiway B is a candidate for removal. Further, due to the profile correction of Runway 5L-23R, a portion of parallel Taxiway B would need to be reconstructed in order to meet FAA grading criteria. This longitudinal correction would require reconstruction to a portion of Taxiway B5 (south of TW B). Given that Taxiway B5 would be affected by demolition/reconstruction work, it was determined that complying with EB-75 (demolition of B5) would increase safety, without having adverse cost implications to the program. Finally, as the decision to demolish Taxiway B5 (south of TW B) became evident as part of the preferred concept, the demolition of Taxiway B9 was added to the program, since its function becomes obsolete once Taxiway B5 (south of Taxiway B) is removed (See **Figure 8**). It should be noted that, as design development progresses and new data is collected, some modifications to the preferred taxiway configuration plan may occur.
- *Instrument Landing System Upgrade* – As the stakeholder coordination in Section 2 revealed, the FAA had previously programmed an upgrade in ILS equipment for Runway 5L-23R in their future funding queue. Specifically an upgrade of the Approach Lighting System (ALS) is being budgeted for at the FAA NAS offices. Due to the age of the equipment of the full ILS, it was determined that this project is a good opportunity to upgrade the entire ILS, which includes the following:
    - Approach Lighting System with Sequenced Flashers (ALSAF-2) off the Runway 23R end

- Medium Intensity Approach Lighting System with Runway Alignment Indicator (MALSR) off the Runway 5L end
- New Precision Approach Path Indicators (PAPI) on each end of RW 5L-23R
- New Localizer and Glide Slope antenna for both ends

3.2 Impacts to Runway 5R-23L

As noted earlier in the report, the reconstruction of Runway 5L-23R will require a 12-18 month shutdown period. During this time, all aircraft operations will be routed to Runway 5R-23L. As a result, the design team looked at the following impacts/improvements that would result from the increased levels of traffic on Runway 5R-23L:

- *Pavement evaluation of Runway 5R-23L* – The design team did a walking survey of Runway 5R-23L to determine the pavement condition as it exists and to render an opinion on potential repairs/improvements with the knowledge that all aircraft traffic will be routed to Runway 5R-23L during the shutdown period. The full assessment report can be found in the "Runway 5R-23L Rehabilitation Needs Assessment" within Appendix C (page C-10). Its findings and subsequent recommendation can be summarized as follows:
  - The runway has 5 distinct pavement sections due to the history of its development. The oldest section was constructed in 1944, and through the many years of improvements (such as overlays), it remains the thickest/strongest sections. The newest section was built in 1989 (Runway 5R extension) and overlaid in 1998. This "youngest" section is also the thinnest, and therefore most susceptible to damage with the increased loads when all traffic is routed to Runway 5R-23L. However, as the needs assessment in Appendix C concludes, the Runway 5R extension section appears to possess the structural capacity to handle the increased loads during the shutdown period.
  - Most of the cracking observed was consistent with the age of the pavements and the findings of the recent PCI study. Cracking at the longitudinal pavement joints, some reflective cracking and separation cracks were typical. Cracks due to settlement or other failures were not detected.
  - While the previously conducted PCI Study, as well as the design team's field survey, classifies the Runway's condition as "Good", the increased traffic from the Runway 5L-23R shutdown may affect the pavements, particularly in the area of the 1989 extension.

  Recommendation - Based on the preliminary analysis conducted to date, it is our opinion that the Runway 5R/23L and supporting pavements need some degree of

improvement in order to serve as the primary runway and taxiway system during the Runway 5L/23R shutdown period. While structural capacity is not a major concern, some surface maintenance measures are recommended prior to the shutdown period. They can be generally described as follows:

- Pavement Repair on the Runway and Taxiway A system. In an effort to minimize the need for maintenance operations during the Runway 5R-23L exclusive use period, the recommendation is to crack seal and selectively patch distressed areas as depicted on **Figure 3**.

- *Instrument Landing System (ILS) – Precision Approach Feasibility* – In an attempt to provide answers to the questions posed in the original design team meeting held on June 24, 2010 (Section 2.1), the team procured the services of a Terminal Instrument Procedures (TERPS) analysis subconsultant (QED) to study the feasibility of installing an ILS on either end of Runway 5R-23R. The detailed report can be found in Appendix C, page C-43. A summation of the report's conclusions are as follows:
  - ***Is the installation of an ILS on either end of Runway 5R-23L feasible?*** Yes, either end of Runway 5R-23L could maintain an ILS.
  - ***What, if any airspace obstructions may adversely affect the establishment of an ILS on Runway 5R-23L?*** According to the report, transmission lines off the end of Runway 5R penetrate the 34:1 approach surface by 4.93'. However, it was noted that the assigned elevation for this penetration carries a survey accuracy code of 1B within the FAA database, which triggers a 10' elevation "penalty" during FAA evaluation. If the FAA were to use the more recent survey of the transmission lines conducted by Cannon & Cannon in 2011, the accuracy code could achieve a 1A status, and no elevation penalties would be assessed. Using the most recent Cannon & Cannon data, there are no penetrations to the 34:1 approach slope. Given this, approach minimums for a Runway 5R ILS could be 200-3/4 without an approach lighting system (ALS), and 200-1/2 with an ALS. For the Runway 23L approach, two obstacles were identified as penetrating the obstacle clearance surface. The first is a light pole located within the fuel farm area and is pictured in the QED report in Appendix C. The light pole penetrates the surface by 0.27'. Steps to lower or relocate the identified light pole will eliminate the surface penetrations. The second obstacle for the Runway 23L approach is a cluster of trees located north of the Shoney's Restaurant parking lot as shown in the Appendix C QED report. The accuracy code within the FAA database assigned to these trees is 2C, which assigns a 20' elevation "penalty" to FAA evaluation. A new survey that complies with accuracy code 1A criteria could eliminate the penalty, and render the Runway 23L approach clear. It is possible however, accurate survey will dictate that the trees be cut down or removed to achieve the most favorable minimums. If steps are taken to

eliminate the cited obstacles for the Runway 23L end, the same minumums could be achieved as those of Runway 5R (200-3/4; 200-1/2 with an ALS).

- ***Will the less than standard separation of Taxiway A to Runway 5R-23L require the taxiway to be relocated in order to install the ILS?*** The report concludes that while the lateral separation standards for Runway-Taxiway separation do not meet the 400' requirement on the Runway 5R end (it is currently 350'), operational procedures could be coordinated through the air traffic control tower personnel that would restrict the parallel taxiway use during CAT 1 ILS arrivals. It is the opinion of the report that this temporary measure may satisfy the FAA until funds can be secured to permanently address this Runway 5R-23L/Taxiway A separation issue.

- *Instrument Landing System (ILS) – Equipment Feasibility* – While the bullet points above explore the operational feasibility of an ILS on RW 5R-23L, the design team also needed to explore the options regarding the actual equipment procurement. Four initial options were identified by the design team as potential strategies for the establishment of an ILS on Runway 5R-23L. Through discussions with contacts within the ILS equipment industry, each of the 4 options was evaluated. They are listed below with a design team assessment:
  1) Pursue an FAA provided CAT I ILS – This option would consist of the establishment of an ILS on the secondary runway (5R-23L) through the conventional process within the FAA. This would likely include a justification exercise, funding coordination and time on a waiting list. ***Design Team Assessment:*** It is unlikely that sufficient justification could be garnered for an ILS on the secondary runway given the current daily operations at the airport to satisfy FAA cost/benefit criteria on merits alone. Further, the timeline and cost remains an unknown as the FAA maintains a backlog of requests today.
  2) Temporarily relocate an ILS from Runway 5L-23R – This option would "borrow" one of the two existing landing systems from Runway 5L-23R and relocate it for use on Runway 5R-23L. At the conclusion of the Runway 5L-23R Reconstruction Project, the system would be returned and installed as it was before on Runway 5L-23R. ***Design Team Assessment***: Due to precedence for this type of request at other airports, it is highly unlikely for the FAA to support a relocation of one of their systems on a temporary basis. Further, the coordination required would be even greater than for the establishment of a new ILS as described above, as essentially this option involves the establishment of 2 systems (one temporary and one permanent). Similar to the option discussed above, an unknown timeline and cost would be associated with this concept.
  3) Acquire CAT I ILS equipment with Non-FAA funding sources – This option would pursue the procurement of localizer and glideslope antenna equipment outside of the FAA. However, the make and model of the

equipment would be of an "FAA configuration" and ultimately require FAA involvement for the development of approach procedures. While there is some considerable earthwork fill associated with establishing the glide slope critical area as illustrated on **Figure 3** (Page 18), it is the opinion of this report that this earth moving can be considered part of the Runway 5L-23R Line of Sight correction and therefore funded through that project. That said, for cost analysis purposes in **Section 4**, the "End-Fire" glideslope system was also explored due to its ability to potentially minimize embankment requirements in the critical area mentioned above. It is understood, initially at least, that maintenance costs of the equipment would be the responsibility of the airport sponsor. ***Design Team Assessment***: This option would most likely allow the airport sponsor the most control over timeline and budget. While the FAA would not fund the purchasing of equipment, the time savings may offset the cost implications as the overall program could accelerate many months and possibly years.

4) Lease a temporary ILS on Runway 5R-23L – This option would require the airport sponsor to lease the necessary ILS equipment on Runway 5R-23L for the duration of the Runway 5L-23R Reconstruction Project. At the conclusion of the reconstruction, the equipment would be turned back in to the supplier. This option would also require FAA involvement for the development of approach procedures. If the benefits associated with this temporary system are significant, then the airport sponsor may pursue a lease to purchase arrangement at a later date. ***Design Team Assessment***: Similar to Option 3, this option would also allow the airport sponsor some control over timeline and budget. It should be noted that this arrangement would be unprecedented, but industry contacts indicate it could be feasible. Another aspect of this option is the understanding some of the costs incurred to construct the sitework improvements to support the establishment of an ILS system should be considered "sunk costs", and not recoverable costs, due to the fact that once the leased ILS equipment was returned to the vendor, then the sitework improvements would become general airport property.

It should be noted that all of the above conclusions and recommendations are subject to FAA review. However, based on the information available at this time, with a goal of moving the program forward in as timely a manner as possible, it is the recommendation of this report to either acquire the ILS equipment with non-FAA funding (option 3), or lease the ILS with an option to purchase at a later date (option 4). Both of these options would have a lead time for equipment delivery of approximately 6 months, based on the manufacturer's backlog of work, and an installation time of approximately 4 weeks.

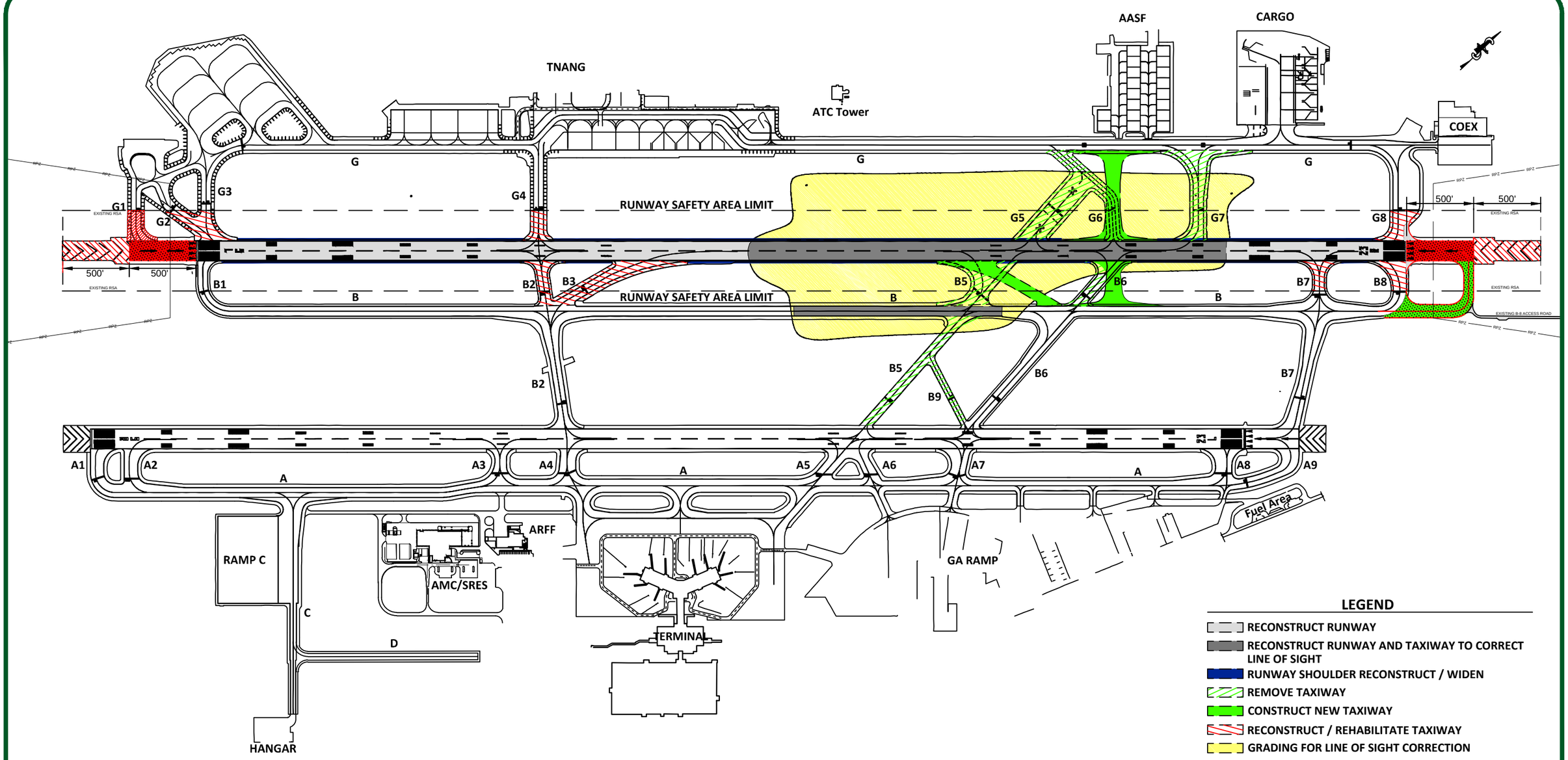
3.3 Proposed Airfield Reconfiguration

The two previous sections illustrate the need to reconfigure some elements of the McGhee Tyson Airfield taxiway system to increase safety and improve ground traffic routing. Initially, the CONSULTANT prepared a taxiway exit analysis as a start to the conceptual design process using current FAA guidance criteria. The referenced analysis and an accompanying graphic (**Figure 7**) can be found on page c-1 in Appendix C. Through an iterative process, the design team utilized information gathered from the stakeholder meetings and the above referenced taxiway analysis, as well as maintained close coordination with MKAA staff, to formulate a proposed airfield taxiway layout plan. This plan is presented in **Figure 8** (Appendix C). The rationale for the placement of the new taxiways, as well as the explanation for the demolition of others, is fully explained in the design memo dated March 2, 2011 and can be found in Appendix C, page C-34. The improvements that were derived from the stakeholder discussions, and not previously cited in the preceding sections, are listed below and are graphically depicted in **Figure 8** (Appendix C):

- *New Connector Taxiway* – One particular "hot spot" cited by ATCT during Stakeholder coordination was that of the intersection of parallel Taxiway A with Taxiways A5, A6 and A7. To increase safety, it is recommended at some point to demolish these three connectors (A5,A6, A7), and replace with a new 90 degree Taxiway in the same area as illustrated in **Figure 8** (new taxiway in solid green hatch)
- *Taxiways G4 & B2 Relocation* – As a safety measure to prevent Runway crossings within the middle 1/3 of Runway 5L-23R, as well as to eliminate a convergence of taxiways (B, B2 and B3 converge), relocating taxiways G4 and B2 should be considered in the long-term improvements as shown on **Figure 8**.
- *New Taxiways near Runway 23L Threshold* – Another safety related recommendation for long term planning would be to eliminate Taxiways B5,B6 and B9 and construct a new 90 degree taxiway that would connect Taxiway G7 to parallel Taxiway A. This would eliminate Runway crossing in the middle 1/3 of Runway 5R-23L, as well as remedy the taxiway convergence issue in the Taxiway B/B6 area.
- *Taxiway A Relocation* – Due to non-standard separation from Runway 5R-23L, Taxiway A would need to be partially demolished and relocated to a uniform distance of 400' between its centerline and that of Runway 5R-23L in order to satisfy FAA criteria. The current program envisions this relocation to occur at the conclusion of this Runway Reconstruction Program.

Based on the input from the numerous stakeholders for this Runway Reconstruction Program, **Figures 2 and 3** represent the Preferred Runway and Taxiway Development

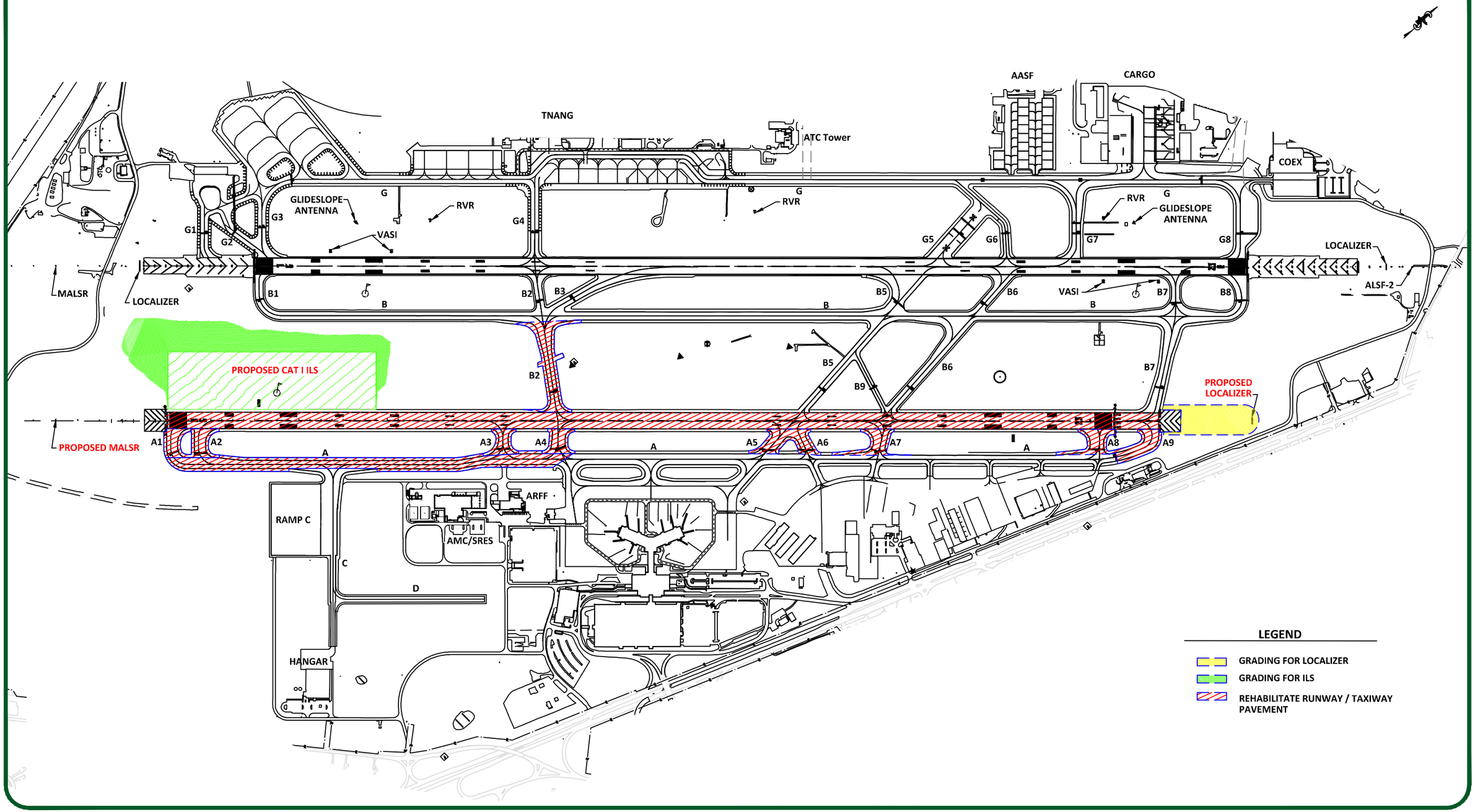
Concepts. It is noted that these concepts are substantially defined in regards to the major components to be improved for both the Runway 5L/23R and Runway 5R/23L development corridors. That being said, as the Runway Reconstruction Program continues to evolve and new information is collected during Design Development, some refinements to the Program may occur in regards to the level of improvement performed on the various affected taxiway pavement areas, as well as which taxiway pavement areas will be improved, removed altogether, or remain "as-is".



McGhee Tyson Airport
Runway Reconstruction
Programming and Development Report

Runway 5L-23R
Taxiway Improvements Plan

Figure 2



McGhee Tyson Airport
Runway Reconstruction
Programming and Development Report

Runway 5R-23L
Runway Improvements Plan

Figure 3

Section 4 – Programming Cost Estimates

The airfield development plan depicted on **Figures 2 and 3** represents the various projects that comprise the overall Runway Reconstruction Program. In an effort to provide information for the Airport Authority's financial planning, the team sub-divided the project estimates into a series of stand-alone projects.

A summary of the cost estimates are presented below in **Sections 4.1** through **4.5**.

It should be noted that certain individual work items within each of the following budgetary estimates can have a significant impact on the overall costs for each stand-alone project. These particular items of work are identified within the introduction of each of the sections **4.1** through **4.5**. Because unit pricing on the identified key work items can vary depending on the construction bidding climate, the design team has presented a cost range per project. The Low Cost Scenario for each project will reflect unit costs for the key work items at competitive pricing based on the recent typical bids for similar work. The High Cost Scenario will conversely illustrate project costs that reflect more conservative pricing for the key work items based on recent similar project bids.

A second cost consideration used within the following **Sections 4.1** through **4.5** relates to contingency. The Metropolitan Knoxville Airport Authority's Design Guidelines uses a graduated approach to percentage of contingency applied to cost estimating and opinions of cost. This graduated approach applies a larger percentage of contingency on the Schematic Design phases and reduces the percentage as the project develops through the Design Development stages. The opinions of cost in this report are in the Schematic Design phases which carry a percentage of contingency of 20%.

These contingencies are incorporated into the project cost estimating methodology to account for various factors. These factors include, but are not limited to, the relatively few number of pay items that comprise the cost estimates at this early stage of project development, the possibility of edge of pavement and typical section refinements as additional data is collected during future design stages, the observation that the extent of time between the early stages of design and when the project is advertised will likely affect pay item unit prices, and the reality that the project phasing has not yet been evaluated to a point where it impact on construction costs can be reasonably estimated.

4.1 Project #1: Runway 5L-23R Reconstruction

The project to reconstruct Runway 5L-23R is the main focus of the entire program studied within this report. As the title of the project suggests, the focus of the project is to reconstruct the 9,000' runway to remedy pavement failures throughout the existing concrete. However, there are some important project elements that are in addition to

the runway pavement replacement itself that need to be acknowledged to more fully understand their cost implications to the project. They are:

- *Line of Site (LOS) Correction* – As shown in **Figure 2** and explained further in **Section 3.1**, over 3,000 linear feet of the existing Runway 5L-23R will require a longitudinal profile correction. Adjusting the runway profile to meet FAA LOS criteria will require earth moving activities in excess of 300,000 cubic yards.
- *Connecting Taxiway Reconstruction* – The LOS correction on Runway 5L-23R also affects Taxiways B, B5, B6, G5, G6 and G7 as illustrated in **Figure 2**. Specifically, over 1,500 linear feet of Taxiway B will require reconstruction to meet FAA grading criteria as well as Part 77 requirements. Further, modifications to the Taxiway B5/B6, G5/G6, and G7 areas will need to be undertaken.
- *New Paved Shoulders* – As part of this reconstruction project, it is intended to build new paved shoulders in accordance with the latest FAA guidance. As of today, shoulders on Runway 5L-23R do not meet FAA criteria.
- *Sub-base Treatment* – Based on previous projects on neighboring taxiways to Runway 5L-23R, it has been assumed that additional soil stabilization measures will be needed throughout the entire length of the runway.
- *Grading/Drainage Improvements* – **Figure 2** illustrates that a large area will need re-grading as a result of the LOS correction. As such, some additional drainage improvements will be necessary that are above and beyond the typical pavement replacement project. Installation and/or adjustment of drainage structures, new pipe, erosion control measures and large areas of grassing will be needed.

The table below summarizes the projected costs of Project #1 in the High/Low scenarios described at the beginning of this section. Based on the construction scope of work associated with this project, the key work items that were identified for High and Low estimates are:

- Mobilization
- Pavement Removal
- Subgrade Preparation
- Stabilized Base
- Asphalt Shoulders (surface and base courses)
- Concrete Paving
- Excavation
- Underdrain
- Centerline and Touchdown Zone (TDZ) Lighting
- Pavement Grooving

Table 1

Opinion of Cost

Runway 5L-23R Reconstruction Project

	Item Description	Total-LOW	Total-HIGH
1.	Mobilization/Maintenance of Traffic	$1,932,700.00	$2,798,300.00
2.	Runway Pavement Reconstruction (9,000' x 150'):		
	-Remove Existing RW Pavements	*$459,000.00*	*$612,000.00*
	-Subgrade Preparation	*$1,524,100.00*	*$1,905,170.00*
	-Stabilized Base/Concrete Paving	*$14,229,000.00*	*$15,606,000.00*
	-New Centerline Lighting	*$625,600.00*	*$733,600.00*
	-Pavement Marking/Grooving	*$926,750.00*	*$1,121,900.00*
	-Underdrain System	*$1,257,400.00*	*$1,460,340.00*
	Subtotal:	$19,021,850.00	$21,439,010.00
3.	New Runway Shoulders (25' Wide)		
	-Asphalt Paving (Surface and Base)	*$1,435,300.00*	*$1,541,140.00*
	-New Edge Lighting System	*$571,600.00*	*$571,600.00*
	Subtotal:	$2,006,900.00	$2,112,740.00
4.	Parallel TW B Reconstruction (approx 1,500 LF)		
	-Remove Existing TW B Pavements	*$83,350.00*	*$97,800.00*
	-Subgrade Preparation	*$144,000.00*	*$179,900.00*
	-Stabilized Base/Concrete Paving	*$1,235,350.00*	*$1,357,650.00*
	-Pavement Marking	*$21,100.00*	*$21,100.00*
	Subtotal:	$1,483,800.00	$1,656,450.00
5.	Taxiways B5,B6 and G6 Recons. (approx 1,700 LF)		
	-Remove Existing TWs B5,B6,G5,G6,G7 Pavements	*$256,200.00*	*$334,200.00*
	-Subgrade Preparation (B5, B6, G6)	*$229,100.00*	*$286,400.00*
	-Stabilized Base/Concrete Paving (B5,B6,G6)	*$2,771,450.00*	*$3,328,500.00*
	-Pavement Marking (B5,B6,G6)	*$27,600.00*	*$27,600.00*
	Subtotal:	$3,284,350.00	$3,976,700.00
6.	Grading and Drainage		
	-Earthwork (approx. 350,000 CY)	*$725,400.00*	*$1,395,400.00*
	-Drainage Components	*$368,740.00*	*$368,740.00*
	Subtotal:	$1,094,140.00	$1,764,140.00
	Total Construction	$28,823,700.00	$33,747,300.00
	Construction Contingency (20%)	$5,764,700.00	$6,749,500.00
	Engineering and Construction Services	$2,500,000.00	$2,500,000.00
		LOW	**HIGH**
	Grand Total Cost	**$37,088,400.00**	**$42,996,800.00**

4.2 Project #2: Runway 5R-23L ILS and Associated Sitework

Sections 2 and **3** have established that the importance of maintaining an Instrument Landing System (ILS) for the airport users is critical during the Runway 5L-23R reconstruction period. As such, this important component of the overall Runway Program is presented as a stand-alone project. As with Project #1, this project also has some specific work elements worthy of note that impact the overall cost of the ILS System. They are:

- *Glideslope Critical Area Grading* – **Figure 3** depicts a possible glideslope critical area for the proposed ILS. The green contours convey that a significant amount of fill material will be necessary to bring this approximated glideslope critical area up to grade. This extensive earthwork is within the calculation of the High Cost Scenario in **Table 2**. Conversely, the Low Cost Scenario will address the cost implications of utilizing the End-Fire glide slope antenna system. The End-Fire system is intended for runways with limited flat terrain surrounding it. In this application, the End-Fire system will greatly reduce the embankment needed to build up the approximate glideslope critical area depicted in **Figure 3**.
- *Approach Light System* – A Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR) is the approach light system assumed for this report. As **Figure 3** depicts, the proposed MALSR extends off the Runway 5R end. As with the glideslope critical area, the ground elevations drop off significantly from the Runway 5R end grades as the Runway centerline extends west. As a result, the approach lights for the MALSR may require abnormally tall towers (>80'), or significant grading activities to build up embankment in and around the tower bases (thus allowing shorter towers).

Therefore the key cost components analyzed for the purposes of the High/Low Cost comparison are:

- Mobilization
- Conventional Glide Slope Antenna System
- End-Fire Glide Slope Antenna System
- Conventional Localizer Antenna System
- Approach Lighting System

Table 2

Opinion of Cost

Runway 5R-23L ILS and Associated Sitework

	Item Description	Total-LOW	Total-HIGH
1.	Mobilization	$252,000.00	$709,600.00
2.	Runway 5R Localizer		
	-Earthwork, Access Rd. & Assoc. Sitework	*$150,000.00*	*$150,000.00*
	-Localizer (incl. Equipment & Shelter)	*$700,000.00*	*$1,000,000.00*
	Subtotal:	$850,000.00	$1,150,000.00
3.	Runway 5R Glideslope		
	-Earthwork, Access Rd. & Assoc. Sitework	*$200,000.00*	*$3,720,000.00*
	-Conventional Glideslope Antenna (incl. Equipment & Shelter)	-	*$500,000.00*
	-End-Fire Glideslope Antenna (incl. Equipment & Shelter)	*$750,000.00*	-
	Subtotal:	$950,000.00	$4,220,000.00
4.	Runway 5R Approach Light System		
	-Earthwork, Towers, Access Rd. & Assoc. Sitework	*$1,300,000.00*	*$3,250,000.00*
	-Approach Light System and Shelter	*$175,000.00*	*$250,000.00*
	Subtotal:	$1,475,000.00	$3,500,000.00
	Total Construction	$3,527,000.00	$9,579,600.00
	Construction Contingency (20%)	$705,400.00	$1,915,900.00
	Engineering and Construction Services	$900,000.00	$900,000.00
		LOW	**HIGH**
	Grand Total Cost	**$5,132,400.00**	**$12,395,500.00**

4.3 Project #3: Runway 5R-23L Rehabilitation

The third project presented in the cost estimates reflect the recommendation to prepare the inboard runway (5R-23L) for all operations during the Runway 5L-23R reconstruction. Additionally, the Taxiway A system should be considered for these same improvements as those taxiways are subject to the same increased traffic of Runway 5R-23L during the shutdown period. The general scope of the project consists of small, medium and large crack repair, along with rubber removal and pavement marking. The opinion of cost is presented below in **Table 3**. As with the other projects, there are certain pay items whose unit price will largely dictate the overall cost of the project, and are therefore presented with the High/Low cost scenarios. They are:

- Mobilization
- Crack Repair
- Rubber Removal
- Pavement Marking

Table 3

Opinion of Cost

Runway 5R-23L Crack Repair Measures

	Item Description	Total-LOW	Total-HIGH
1.	Mobilization/Maintenance of Traffic	$118,300.00	$171,400.00
2.	Pavement Crack Repair Measures	$265,000.00	$640,000.00
3.	Pavement Marking/Rubber Removal	$292,500.00	$585,000.00
	Total Construction	$675,800.00	$1,396,400.00
	Construction Contingency (20%)	$135,160.00	$279,280.00
	Engineering and Construction Services	$250,000.00	$250,000.00
		LOW	**HIGH**
	Grand Total Cost	**$1,060,960.00**	**$1,925,680.00**

4.4 Project #4: Runway 5L-23R Extension (TNANG)

In **Section 2** of the report, it is shown that the Tennessee Air National Guard (TNANG) desires to extend the 5L-23R runway as part of the runway program to support its mission. The proposal is to improve the runway length 500 linear feet off of each end of the runway for a total improved length of 1,000 linear feet. At this time there is no proposal to move the thresholds or adjust the ILS systems currently in place. As such, the "published" runway length of 5L-23R will remain at 9,000 linear feet. **Figure 2** depicts the proposed pavement improvement limits. It should be noted that **Figure 2** also illustrates an extension of Taxiway B on the Runway 23R end. Again, multiple construction pay items may have a significant impact on the project's overall cost, and are therefore presented in the High/Low range used previously and can be seen in **Table 4**. The particular pay items are:

- Mobilization
- Lime Treated Subgrade
- Concrete Paving
- Asphalt (Surface and Base Course)

Table 4

Opinion of Cost

Runway 5L-23R Extension (TNANG)

	Item Description	Total-LOW	Total-HIGH
1.	Mobilization	$214,836.00	$309,997.00
2.	Lime Treated Subgrade	$399,000.00	$448,800.00
3.	Earthwork/Excavation	$86,264.00	$86,264.00
4.	Runway 5L Extension (500LF)		
	-Concrete Paving (incl. Aggregate Base)	*$750,000.00*	*$833,400.00*
	-Asphalt Shoulders (Base & Surface)	*$68,050.00*	*$71,450.00*
	-Pavement Marking/Sealcoat	*$60,750.00*	*$60,750.00*
	Subtotal:	$878,800.00	$965,600.00
5.	Runway 23R Extension (500LF)		
	-Concrete Paving (incl. Aggregate Base)	*$750,750.00*	*$834,250.00*
	-Asphalt Shoulders (Base & Surface)	*$83,050.00*	*$87,200.00*
	-Pavement Marking/Sealcoat	*$62,500.00*	*$62,500.00*
	Subtotal:	$896,300.00	$983,950.00
6.	Taxiway B Extension (900LF)		
	-Concrete Paving (incl. Aggregate Base)	*$870,000.00*	*$966,000.00*
	-Asphalt Shoulders (Base & Surface)	*$149,150.00*	*$156,600.00*
	-Pavement Marking/Sealcoat	*$18,250.00*	*$18,250.00*
	Subtotal:	$1,037,400.00	$1,140,850.00
7.	Lighting Improvements		
	-RW 5L End	*$30,000.00*	*$30,000.00*
	-RW 23R End	*$79,500.00*	*$79,500.00*
	-TW B Extension	*$32,000.00*	*$32,000.00*
	Subtotal:	$141,500.00	$141,500.00
	Total Construction	$3,654,100.00	$4,077,000.00
	Construction Contingency (20%)	$730,800.00	$815,400.00
	Engineering and Construction Services	$450,000.00	$450,000.00
		LOW	**HIGH**
	Grand Total Cost	**$4,834,900.00**	**$5,342,400.00**

4.5 Project #5: Taxiways B5 & B9 Removal

The fifth project highlighted is the proposed taxiway demolition of Taxiways B5 and B9 between parallel Taxiway B and Runway 5R-23L, as depicted on **Figure 2.** It was determined that continued maintenance of these taxiways is unnecessary given the newly proposed "Taxiway Improvements Plan" (**Figure 2**). Therefore, it is recommended that the taxiways be removed. While it is likely this demolition activity will be incorporated within one of the first 4 projects in this Section, for the purposes of this report, it is presented as a stand-alone project in the following **Table 5**.

Table 5

Opinion of Cost

Taxiways B5 & B9 Removal

	Item Description	Total-LOW	Total-HIGH
1.	Mobilization	$30,000.00	$60,000.00
2.	Existing Pavement Removal (Taxiways B5, B9)	$150,000.00	$300,000.00
3.	Misc. Grading	$60,000.00	$100,000.00
	Total Construction	$240,000.00	$460,000.00
	Construction Contingency (20%)	$48,000.00	$92,000.00
	Engineering and Construction Services	$60,000.00	$60,000.00
		LOW	**HIGH**
	Grand Total Cost	**$348,000.00**	**$612,000.00**

4.6 Summary of Program Costs

The following table represents a consolidated tabulation of Projects #1 through #5 to arrive at an overall program cost projection:

Table 6
Consolidated Cost Comparison
Summary of All Projects

Project	LOW Total	HIGH Total
1. Runway 5L-23R Reconstruction	$37,088,400.00	$42,996,800.00
2. Runway 5R-23L ILS and Associated Site Work	$5,132,400.00	$12,395,500.00
3. Runway 5R-23L Rehabilitation	$1,060,960.00	$1,925,680.00
4. Runway 5L-23R Extenstion (TNANG)	$4,834,900.00	$5,342,400.00
5. Taxiways B5 & B9 Removal	$348,000.00	$612,000.00
	LOW	**HIGH**
Grand Total	***$48,464,660.00***	**$63,272,380.00**

Section 5 – Conclusion and Next Steps

With this program development plan in place, the Airport Authority can now begin to plan for future projects in conjunction with their funding cycle. It is recommended that design development begin on the program as well as continued coordination with the FAA. The Projects 1 through 5 as represented in the tables of **Section 4** can remain as stand-alone projects, or they can be merged in any number of ways to formulate scopes of work consistent with the available funding. The Program Implementation Schedule on the next page illustrates the timeline for the development projects. This representation is subject to change based on additional factors such as funding availability and additional coordination with the various stakeholders.

Based on the information compiled during this programming process, it is the recommendation of this final report to undertake the following steps:

1. Commence design work for both the Runway 5L-23R Reconstruction Project and the Runway 5R-23L Rehabilitation Projects, including Environmental Assessment services and ILS design services. Given that the funding for the program will likely arrive in installments over a period of years, completing the engineering design and maintaining the designs "on the shelf" will provide MKAA with the flexibility to build various portions of the Program each year pursuant to the level of funding offered by FAA, as well as the ability to respond quickly with construction bids in the event that new economic stimulus-based funding initiatives become available.

2. In order to construct these proposed airfield improvements, a well thought out implementation plan is necessary to provide sufficient time to design the various projects, to conduct design and agency reviews in a timely manner, to aggressively pursue elements of the Program that have longer lead times, and to organize the proposed project phasing to provide efficient work areas for the contractor, while minimizing disruptions to normal airport operations. To that end, and based on the information collected to date, the proposed Implementation Plan for this Overall Program shall address the following :

    a. Initiate work on the Environmental Assessment Study, due to the length of time associated with following the formal NEPA process. It is important to note that some of the elements associated with the Overall Program may be able to be constructed under an abbreviated environmental analysis. However, the Environmental Assessment Study needs to progress to a point where the FAA can be presented with the potential impacts, if any, of the various projects that comprise the Overall Program, in order to confirm the level of study required.

    b. Initiate work on the Runway 5R/23L ILS and associated Sitework project, due to the length of time associated with the development of the approach

procedures by FAA. It should be noted that the siting of the ILS equipment is the portion of the design work that is needed by FAA to begin their development of the approach procedures. Concurrent to FAA's work, the balance of the ILS design work can occur.

c. Initiate work on the Runway 5R/23L Rehabilitation Improvements, due to the fact that this work must be designed and constructed before Runway 5L/23R is taken out of service for reconstruction. Fortunately, it is also the portion of the Overall Program that can be ready to bid the soonest.

d. Initiate work on the Runway 5L/23R Improvements, not only due to the magnitude of the design effort for this element of the Overall Program, but also to take advantage of the economy that the Overall Program can realize by merging the design of the Runway 5L/23R Extension Improvements (to be funded by the TNANG) with the current Runway 5L/23R design effort.

e. In concept, the work associated with each of these runway corridors should also include the various taxiway pavement and sitework improvements located within the runway object free area of each runway. This project phasing approach would consolidate the number of work areas available for construction, as well as minimize disruptions to normal airport operations, once the proposed improvements for each runway corridor were completed.

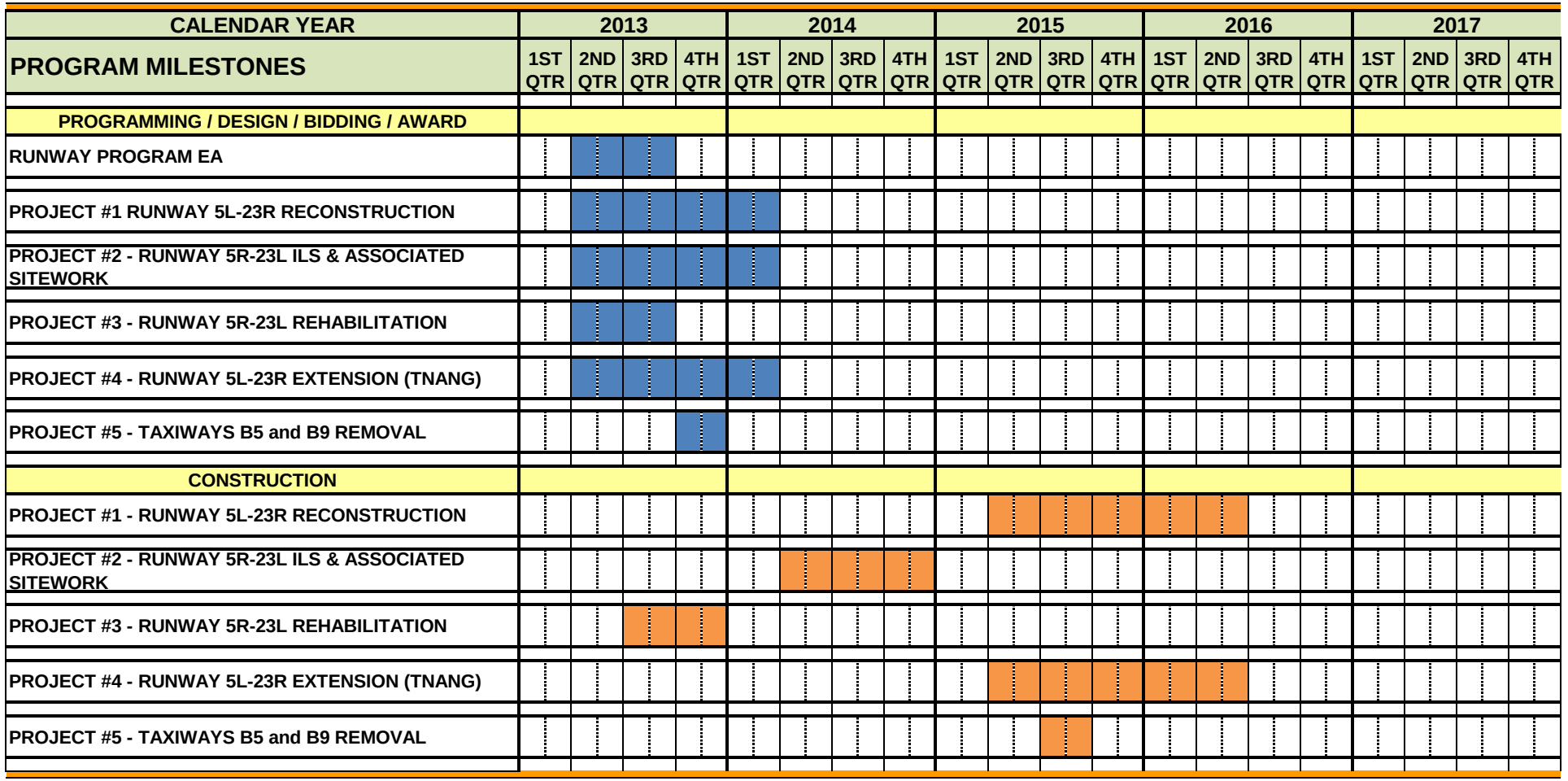
f. It should be noted that the relocation of the portion of Taxiway "A" that is not currently located at a 400-foot separation from the centerline of Runway 5R/23L will occur in the future pending FAA funding availability. Based on the data compiled to date, in order to mitigate any potential adverse operational impacts associated with the proximity of large aircraft on Taxiway "A" during ILS operations, a memorandum of understanding will be executed between MKAA and the ATCT to establish special holding positions on the terminal and FBO aprons during ILS operations by large aircraft. These procedures have been successfully implemented at other Part 139 airports to address similar airfield layout situations.

One of the ironic benefits of this Overall Program is the fact that, due to its' sheer magnitude, there are many opportunities to sub-divide the Overall Program into different sized sub-elements in response to changes in the level of funding. However, in order for MKAA to take advantage of future funding opportunities, it is imperative that the design for the Overall Program be advanced to a point where the design team and MKAA can quickly have their projects ready for advertisement.

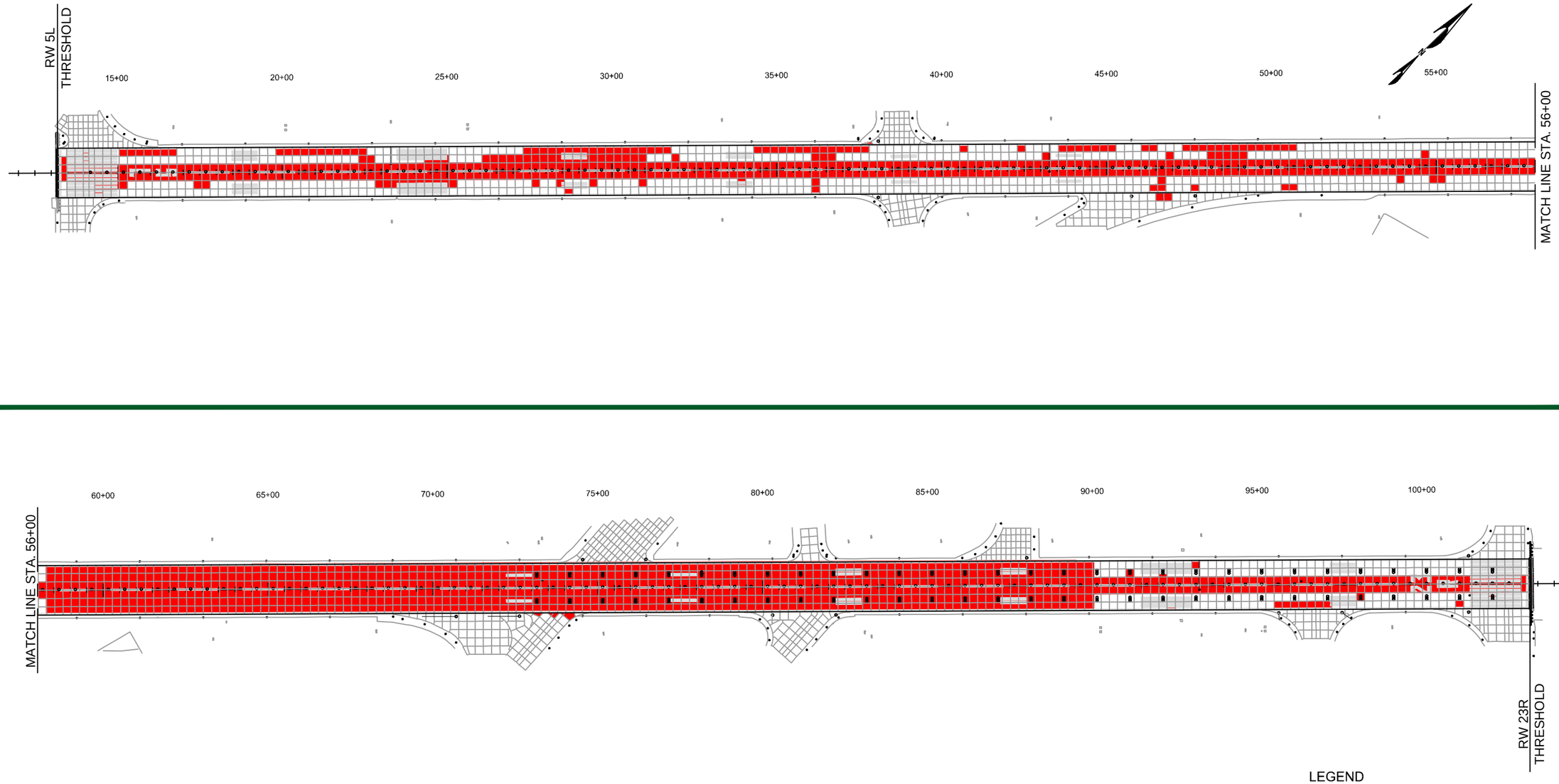
ANTICIPATED PROGRAM IMPLEMENTATION SCHEDULE

MCGHEE TYSON AIRPORT - RUNWAY RECONSTRUCTION PROGRAM

Knoxville, Tennessee


CALENDAR YEAR
2013
2014
2015
2016
2017
PROGRAM MILESTONES
1ST QTR
2ND QTR
3RD QTR
4TH QTR
PROGRAMMING / DESIGN / BIDDING / AWARD
RUNWAY PROGRAM EA
PROJECT #1 RUNWAY 5L-23R RECONSTRUCTION
PROJECT #2 - RUNWAY 5R-23L ILS & ASSOCIATED SITEWORK
PROJECT #3 - RUNWAY 5R-23L REHABILITATION
PROJECT #4 - RUNWAY 5L-23R EXTENSION (TNANG)
PROJECT #5 - TAXIWAYS B5 and B9 REMOVAL
CONSTRUCTION
PROJECT #1 - RUNWAY 5L-23R RECONSTRUCTION
PROJECT #2 - RUNWAY 5R-23L ILS & ASSOCIATED SITEWORK
PROJECT #3 - RUNWAY 5R-23L REHABILITATION
PROJECT #4 - RUNWAY 5L-23R EXTENSION (TNANG)
PROJECT #5 - TAXIWAYS B5 and B9 REMOVAL

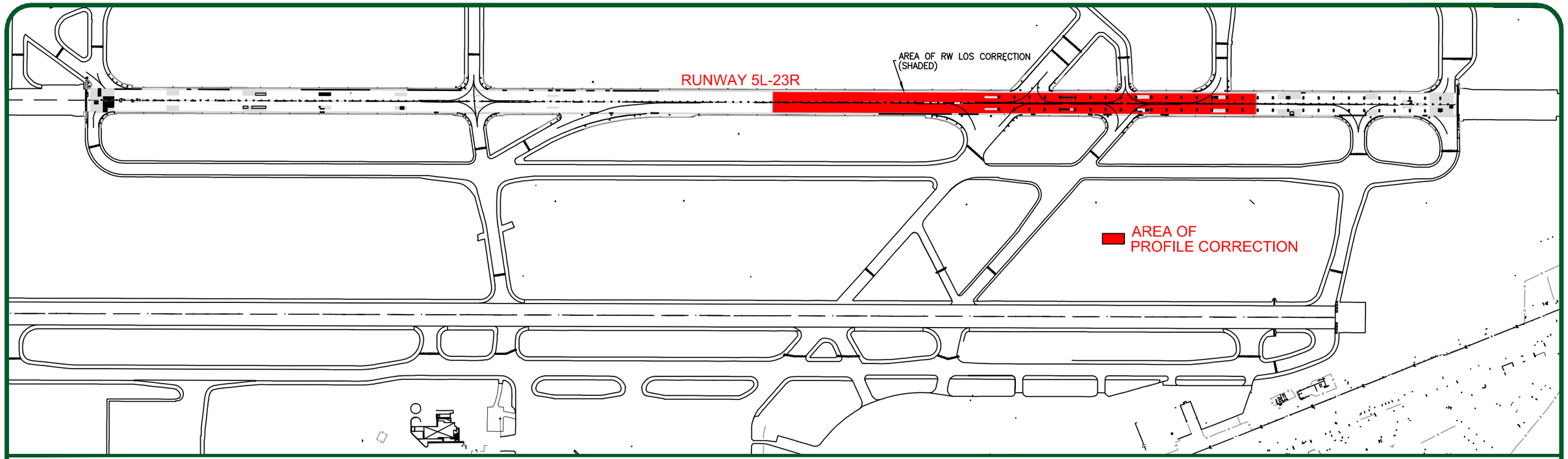
Appendix A: Figures

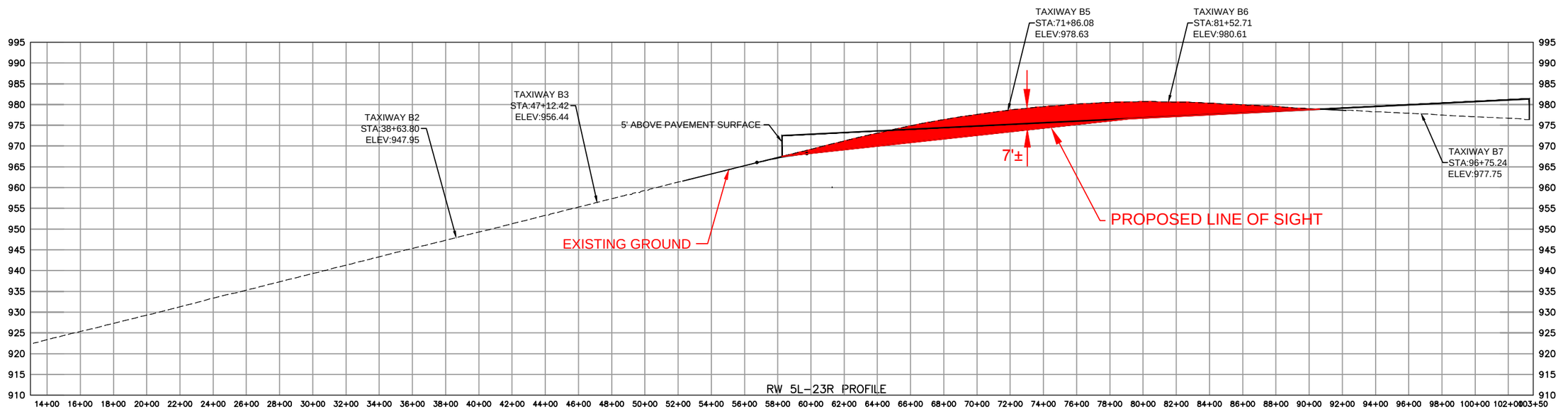


McGhee Tyson Airport
Runway Reconstruction
Programming and Development Report

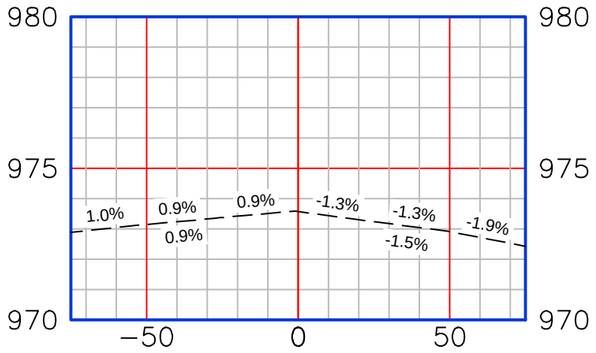
Runway 5L/23R
Slab Removal Identification

Figure 4


RUNWAY 5L-23R
AREA OF RW LOS CORRECTION
(SHADED)
AREA OF
PROFILE CORRECTION


TAXIWAY B5
STA:71+86.08
ELEV:978.63
TAXIWAY B6
STA:81+52.71
ELEV:980.61
TAXIWAY B2
STA:38+63.80
ELEV:947.95
TAXIWAY B3
STA:47+12.42
ELEV:956.44
5' ABOVE PAVEMENT SURFACE
7'±
TAXIWAY B7
STA:96+75.24
ELEV:977.75
PROPOSED LINE OF SIGHT
EXISTING GROUND
RW 5L-23R PROFILE
995
990
985
980
975
970
965
960
955
950
945
940
935
930
925
920
915
910
14+00 16+00 18+00 20+00 22+00 24+00 26+00 28+00 30+00 32+00 34+00 36+00 38+00 40+00 42+00 44+00 46+00 48+00 50+00 52+00 54+00 56+00 58+00 60+00 62+00 64+00 66+00 68+00 70+00 72+00 74+00 76+00 78+00 80+00 82+00 84+00 86+00 88+00 90+00 92+00 94+00 96+00 98+00 100+00 102+00 103+50

64+50.00



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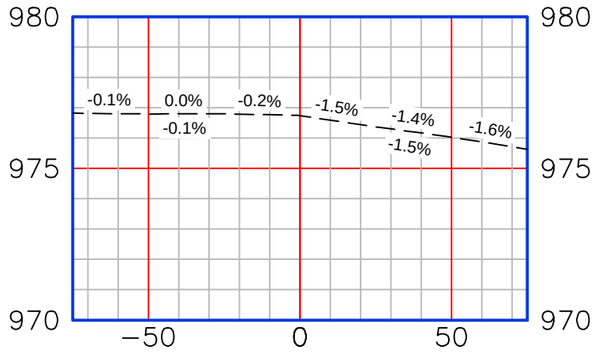

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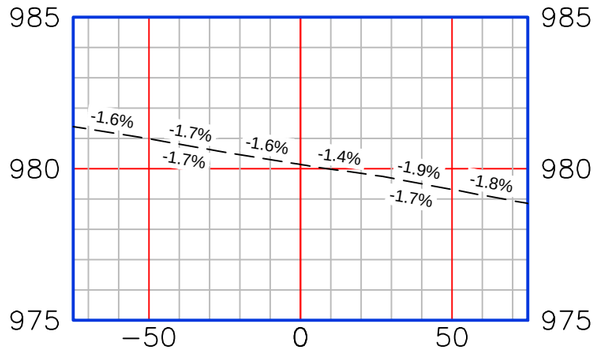

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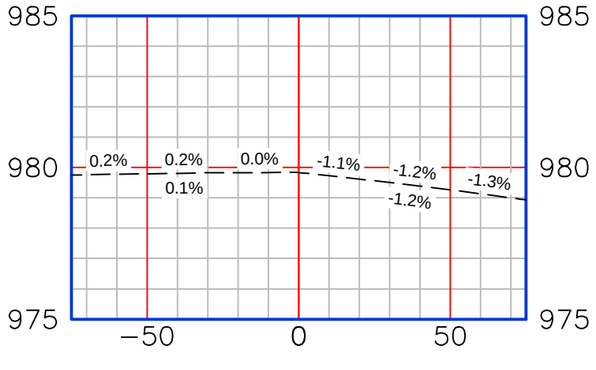

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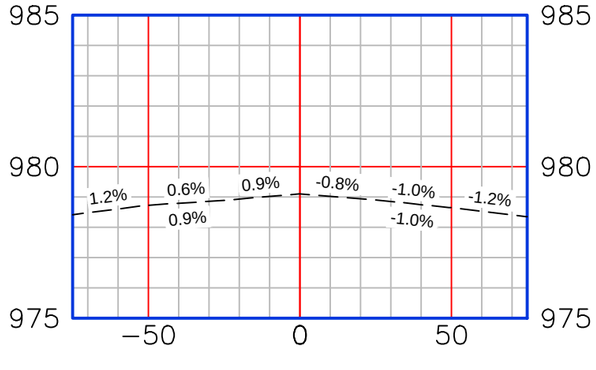


Appendix B: Meeting Minutes

METROPOLITAN KNOXVILLE AIRPORT AUTHORITY

KICKOFF MEETING
June 24, 2010

RUNWAY 5L-23R RECONSTRUCTION PROJECT
PROGRAMMING AND DEVELOPMENT PLAN
OFFICIAL MINUTES

Attendees: Bryan White, Jeff Pike, Mike Reiter, Eric Williamson

I. Project Team Roles

LPA to produce a master contact list for use in the project. Below is a brief list identifying key personnel in the start up of this effort.

A. LPA

1) Mike Reiter – Team Leader, Principal in Charge
2) Jeff Pike – Local Project Manager
3) Jim Hall – Senior Civil Engineer
4) Richard Osborne – Senior Planner
5) Gary Lott – Senior Electrical/Navaids Engineer

B. Subconsultants

1) Bob Lusby - Cannon and Cannon (Survey)
2) John Godfrey - KS Ware & Assoc. (Geotech)

C. MKAA

1) Bryan White – Team Leader
2) Eric Williamson – Project Manager
3) Bryan Rollins – Ops Liaison
   - *Additional MKAA staff will be consulted throughout the project, but the above represents the core group that will be in the day to day communication loop.*

D. Extended Stakeholders

1) FAA – Mike Thompson (Program Manager) / Tim Jenneman(sp?) (Tech Support)
2) TAD – Tom Burgess
3) ATCT – Tammy Easterday (sp?)/Randy Rogers
4) National Guard – Gary Smith (Airfield Ops/Manager) and/or (TW B contact)
5) Airlines – TBD
6) Cargo – TBD
7) TAC Air – Randall Honea (sp?)

8) GA Users Group Representative – TBD
9) MRO Facilities Reps
    a. Pinnacle (Northwest) – Joe Williams
    b. Continental Express – Shawn Murphy

II. Data and Materials Needed

LPA to set up an FTP site for exchange of information during the project. Instructions for use of the site will be forthcoming.

A. TYS Master Plan & ALP Drawing Set (Final Version)

- *EW to supply electronic version for LPA use via the FTP site.*

B. Most Recent Mapping

1) 2004 Elevation and Contour File - **Obtained**
2) 2004 GIS Aerials – **Obtained**
3) Additional Elevation or Mapping Data?
    - *EW to verify with MKAA records that these are the most recent topo files of the airport.*

C. Field Survey Data

1) Survey of RW 5L-23R - **Obtained**
2) 1996/1997 Survey for TW A design (from TW A6/R4 to end of RW 23L blast pad) - **Obtained**
3) Profile RW & TW Centerlines – **Needed**
4) RW End Elevations - **Needed**
5) Approx. 5 cross sections from TW G centerline to 100' South of TW A – **Needed**
    - *Before any survey is activated, LPA to check internal files for any additional survey that may supplement what is mentioned above. Additionally, E.W. to check MKAA files for same.*

D. Geotechnical Data

1) RW 5L-23R (>30 borings on RW and Shoulders, approx 10' deep) – **Obtained**
2) TW B (B1-B6; 22 borings, approx 11' deep) – **Obtained**
3) RW 5L-23R (between mid-RW and TW G; 4 borings 15'-20' deep) – **Needed**
4) RW 5R borings – **Needed**
5) Select TW borings – **Needed**

- *Before any pavement/soils investigation is commenced, LPA to check internal files for any other boring information obtained from prior projects (i.e. 2001 RW Overlay). E.W. to check MKAA records for same.*

E. Operations Data

1) Fleet Mix
   - *LPA to consult recent masterplan and RW usage website (pay site that LPA subscribes to) for purposes of approximating the fleet mix. Additionally, LPA would like to obtain any other potential sources or databases that MKAA may have that would render as accurate a current fleet mix as possible. LPA to coordinate with E.W. on this.*
2) Airfield Usage Patterns
   - *This information to be mostly obtained through ATCT input as well as the user groups via future stakeholder meetings.*

III. Issues to Discuss

A. Taxiway A Relocation

- *Early feedback from FAA on this will be useful. We would like to know generally what the conclusion is on whether the relocation is needed to have an ILS on RW 5R in the future. This knowledge will aid the MKAA/LPA team to best present the general program direction to the FAA representatives on July 27th.*
- *LPA to prepare and submit an exhibit to facilitate further discussions and achieve consensus on the need for this taxiway improvement project as a part of this overall program with FAA/MKAA.*

B. Taxiway Routing

1) Current patterns of flow for aircraft traversing the airfield
   - *Information will be obtained during meetings with ATCT and User groups. This will aid LPA planners as they propose future configurations*
2) Possible routes during RW 5L-23R Reconstruction OR RW 5R-23L Rehabilitation efforts
   - *This phasing exercise will likely be developed by the MKAA/LPA Core group, but will solicit review opinions along the way.*
3) Ultimate taxiway configuration when complete
   - *LPA Planning will ultimately recommend a layout based upon the research and data collection conducted during the*

project. The research includes adherence to FAA methodology as well as extensive stakeholder input.

C. Obstructions

1) Any past obstruction analysis
2) Any past FAA/TAD safety inspection reports
   - *E.W. to check MKAA records for any information or documents pertaining to this issue.*

IV. FAA Regional Planning Conference (7/27/10)

A. Purpose and Goals

B. Arrange meeting

1) Issues to have addressed before meeting
   - *This list is to be developed by coordination between LPA/MKAA in coming weeks.*
2) Presentation?
   - *B.W. to check into the conferences agenda and decide what LPA may contribute to a presentation on the RW Programming goals.*

V. Funding

A. FAA Share

B. State Share

C. Other Potential Sources

- *TANG may be a potential source, but would likely lobby for a RW extension if asked to participate.*

VI. Schedule

A. Approximate Duration – *TBD, largely dependent on success of scheduling meetings.*

B. Preferred order of meetings – *TBD by additional coordination between MKAA/LPA core group.*

C. Key Milestones – *TBD by additional coordination within MKAA/LPA core group.*

D. Sequence of Projects

- *This will be part of the final product that will map a way forward to get to RW 5L-23R Reconstruction. It will serve as a mini-CIP type document for planning purposes.*

JOINT PLANNING CONFERENCE
MCGHEE TYSON AIRPORT
JULY 27, 2010

Attendees:

Thomas Cauthen, 134 ARW, TNANG
Chico Messer, 134 ARW, TNANG
Charles Stroud, 134 ARW, TNANG
Glenn Finnegan, FAA NAS Planning
Mike Gersh, FAA TYS ATCT
Stephen Wilson, FAA Memphis ADO
Mike Thompson, FAA Memphis ADO
Tommy Dupree, FAA Memphis ADO
Mike Reiter, The LPA Group
Jeff Pike, The LPA Group
Jim Hall, The LPA Group
Jim Evans, MKAA
Stephen Wood, TSA/FSD
Eric Williamson, MKAA
Tom Aiken, MKAA
Teri Anderson, US Airways Express - Piedmont
Randy Rogers, FAA
Tim Jenneman, FAA
Alfred Stephens, FAA
Stephanie Marsh, American Eagle
Heather Tyks, MKAA
Becky Huckaby, MKAA
Craig Davis, MKAA
Trevis Gardner, MKAA
Mike Bachman, MKAA
Bill Marrison, MKAA
Bryan White, MKAA
Bryan Rollins, MKAA

Meeting Notes:

Introduction

- Bryan White and Stephen Wilson opened with introductions and purpose of meeting. Plans are to hold these meetings every couple of years.

Status of Projects

- Bryan W. gave a brief review of projects for the next three years:

  Projects in Planning
  Rwy 5L/23R Reconstruction
  Replace Airfield Lighting Regulators
  West Airfield Drainage/North Lateral Drainage

  Projects in Design
  Airport Maintenance Center / SRES

  Projects in Construction
  Taxiway B

Future Projects

GA Ramp Rehab Planning Study
Access Control and Communication Equipment Upgrade
Airfield Perimeter Road Planning
Master Plan Update
5R/23L and Taxiway 'A' Overlay
Snow Removal Equipment
West Airfield Drainage/South Lateral

- Bryan W. highlighted two projects, AMC and 5L/23R Reconstruction that will take all funds for next few years. Mike T. stated it could take 5 years or longer if based on entitlement funds only. Bryan stated the 5L/23R project will hopefully compete for discretionary funds.
- Tommy Dupree asked when GA Ramp will get started. Bryan responded it is most likely7 to 8 years out before construction based on funding, but we won't know specifically until the planning study is complete. We will compete for discretionary funding for the project as well.
- Bryan W. stated it will probably be 5 years before we start construction on 5L/23R Reconstruction based on all the identified sub-projects required prior to closing our primary ILS runway. There could potentially be a project to install an ILS on the 5R/23L runway, TWY A alignment correction and 5R/23L overlay may be required; Additional projects may emerge from the upcoming programming and planning sessions.
- Tommy D. asked if we are going to seek additional funding support from TNANG with 5L/23R Reconstruction. Col. Cauthen stated he needs to know when we would plan to start the project in order to determine the possibility of military funds available; Tommy D. indicated start would be no sooner than 2 years, with a 3 to 5 year range most likely.
- Mike Reiter with LPA gave history and overview of 5L/23R Reconstruction project (presentation attached).
- Tommy D. asked why pavement is not first priority for MKAA. He asked what condition of existing pavement is. Mike R. responded it is good to fair. Bryan explained that the pavement is in good condition, but is reaching its useful service life and is becoming a continual maintenance project. Trevis stated the maintenance cost curve is starting to get steep and the need to close the runway for repairs is becoming more and more frequent.
- Bryan gave a more detailed explanation of condition and explained that pavement condition is good because of the continual spall repairs and crack sealing conducted by our airfield ops. Bryan further went on to describe the pavement failure sequences on TWY G7 and TWY B and stated that the 5L/23R Runway was reconstructed around the same time and with similar methods – the pavement failure modes may be as rapid as the latter projects. Both Bryan and LPA stated they have a good confidence level that the runway will continue to perform for at least 5 more years, but will have to be reevaluated in approximately 3 years. Bryan stated that core samples were taken 3 years ago; the samples showed the sub-grade to be in good condition, but all precautions must be taken to keep

moisture away from the sub-grade to prevent deterioration. There is also a low confidence that the under drains are in good condition and this creates concern for moisture in the sub-grade.

- Tommy D. asked what we are looking for as far as funding. Bryan W. stated Discretionary. Tommy says FAA requires use of Entitlement funds on higher priority projects and the FAA views a runway project as a high priority. It was noted that a maximum of $7M-$10M of discretionary funds may be available per year. This would require a multi-year project program since current estimates are well above this threshold.
- Mike B. noted that MKAA is already at its bonding capacity, further limiting fundraising options.
- Stephen Wilson asked about environmental impact for community regarding noise issues from using one runway while 5L/23R is under construction. Trevis stated that the airport did not receive any complaints when we shifted traffic to 5R/23L last year during the TWY B project, but would certainly coordinate with the local community.
- Col. Cauthen stated that TNANG would be interested in extending RWY 5L/23R and may possibly fund extension based on availability. At this time an extension to 10,000 ft. is not required for TNANG, but could be depending on new aircraft. TNANG should know this fall if an extension is required based on selection of new tanker aircraft.
- FAA inquired if necessary property is available should the extension be pursued. MKAA stated that property is available.
- Tommy D. asked who would do environmental study for extension. Col Cauthen replied that TNANG could possibly provide funding.
- Tommy D. noted that the FAA participates in costs justified for commercial aircraft only, and not any military needs.
- Bryan stated that there are increased maintenance responsibilities on a longer runway and the MKAA may seek yearly offset from TNANG for this expense. Col. Cauthen acknowledged that while TNANG wouldn't perform yearly maintenance on the RWY, that there are mechanisms in place now for the same situation.
- Mike T. stated the MKAA needs to reconsider if they are spending money in the right priority with the AMC or RWY 5L/23R projects.
- Mike T. asked about TWY A relocation and how it will be addressed.
- TNANG noted that they do not have an approach to 5R. TNANG and Bryan W. noted that the fleets for both the Guard and Airlines (except for one in planning) cannot use the current GPS approach for 5R.
- Mike T. noted that no waivers would be issued on TWY A and that appropriate RWY-TWY separation needs to occur. The idea of a possible temporary operating agreement was discussed that may incorporate apron hold bars, circle approach, etc. To be further investigated via on-going planning study.
- Glenn Finnegan asked for airlines input and specifically if we can use RWY 5R/23L without navaids. Bryan stated the runway has non-precision approaches currently on the runway.

- TNANG related again that 10,000' of RWY preferred, but not presently required. TNANG also stated an extension without moving the thresholds could still be useful by providing extra take-off length.
- Glenn F. stated that a determination is needed to put an ILS on RWY 5R/23L – a study to evaluate feasibility should be a top priority for MKAA. Mike T. requested that data related to placing an ILS on RWY 5R/23L and the need for relocating TWY A to a uniform 400 ft. separation be provided to him so that it can be properly routed to all FAA departments.

Environmental Issues

- Stephen W. advised he is the environmental contact with FAA and any questions or concerns with projects should be addressed with him, especially for categorical exclusions, new projects, environmental assessments, etc.
- Bryan W. acknowledged and stated MKAA views environmental issues as a high priority on all projects and is very proactive as an organization.

Business Development

- Jim Evans gave overview of business development and provided marketing handouts.
  We are continually looking to bringing in low fare carriers in addition to the two we have.
  We are also looking at international flights and seeing what it would take to set up this airport for international service. We are one of Delta's and other international air carrier's alternate primary diversion airports.
- Bryan W. stated this is another factor reflecting our need for an ILS on 5R/23L RWY while our primary 5L/23R RWY is being reconstructed.
- Mike T. asked if airfield geometry was considered with international option. Bryan responded that we have a planning study in CIP to look at an international terminal and MKAA will amend the ALP if the pending study reflects changes required.
- Jim E. stated the West Aviation Area is another big opportunity for growing business. We would like to see more MRO facilities in that area.
- Mike Bachman advised that there has been interest from external parties in putting in solar panels adjacent to the Alcoa electrical substation, but the TVA program appears to be expired. If the TVA program is extended, then there is an expectation that the interest will revive.

Funding Issues

- Mike T. stated that basically the RWY 5L/23R and AMC projects will probably take up the next 8 years of federal funding, which negates other projects in the CIP
- VALE funding is for qualifying environmental projects. Mike B. suggested that the solar panel project (solar farm) might be eligible. Stephen W. says we have to go through Washington for application. Mike T. says it might not be eligible; he will get us more information. VALE is a discretionary source (old noise program).
- Mike B. stated there are no PFCs funds available in the near future b/c all are committed to terminal.
- No more stimulus funding appears to be available at this time.

Federal Agency Projects and Issues

- TSA has been working with Trevis on advanced imaging technology fielding.
- TSA will pay for checkpoint equipment and facility upgrades, but not facility changes.

Operational Issues

- Tim J. stated he is still trying to get FAA funding for ALS replacement.
- Tommy D. stated the ALS again highlights the urgency for RWY 5L/23R Reconstruction to be fully coordinated with all parties.
- Part 150 – No changes to noise maps are expected for RWY 5L/23R Reconstruction with temporary operational conditions.
- FAA is looking to amend some departure procedures and will inform.
- Tommy D. reviewed FAA changes to flight procedures (RNAV) - out of ATO support group.

Tenant/User Improvements and Issues

- TNANG would be required to maintain rapid access to 5R/23L if 5L/23 is closed for construction.
- Gross weight limit on 5R/23L may be exceeded by KC 135 aircraft when fully loaded (dual tandem – 320,000 lbs), but this would be a 9-11 equivalent event that would require us to depart fully loaded. Based on normal operations, the KC 135 take-off weight will be less than the published max for our aircraft type. TNANG also related that landings would never occur with an aircraft weight greater than 200,000 lbs. Bryan W., Trevis and CMSgt. Stroud agreed this situation can be addressed via a local operating agreement between TNANG and MKAA.

- Tommie D. asked if it is possible for TYS to be without an ILS for a year during construction. He asked the airlines, TNANG and any stakeholders to comment on their needs. Bryan stated that he will ask LPA to perform an interview of needs as part of the programming study.
- Bryan stated that we have a lot of ILS events in the morning (fog) throughout the summer and they occur during our high traffic outbound and inbound time. Tommie D. stated the normal ILS events at airports are around 3%. Trevis stated that our ILS events are around 9% and Randy R. concurred.
- The question was raised about how the RWY program will affect Air Cargo operations. It was noted that the on-going study will address this issue.
- TNANG noted that they currently do not have an approach to 5R, only a circle to land via 5L.

Other Planning Considerations

- Bryan W. discussed the Oak Ridge GA airport that is currently be studied by the MKAA.
- Tommie D. asked if the MKAA is proposing to be the sponsor. Bryan W. stated that those mechanisms are being studied and it is a possibility that the MKAA will be the sponsor. Bryan stated that state, federal and local funding would be used to construct the GA airport in Oak Ridge should it become a reality.

Conference Summary

- Glenn F. requested meeting to coordinate schedule of ALS and 5L/23R.
- Tommie D. requested results of stakeholders in reference to ILS usage.
- Bryan W. stated that minutes would be distributed to the attendees.

MCGHEE TYSON AIRPORT
RUNWAY 5L-23R RECONSTRUCTION PROGRAM

MEETING WITH FAA NAS PLANNING - SUMMARY

Date: August 10, 2010

Attendees: Eric Williamson – MKAA
Glenn Finnegan – FAA NAS Planning
Mike Reiter – LPA
Jeff Pike – LPA
Jim Hall – LPA

Purpose: Follow up meeting to the 7/27 planning conference with FAA NAS Planning; To further discuss issues and strategies regarding Navaid implications of the RW 5L-23R Reconstruction Program

Comments:

1. All acknowledged that there is a very important need for close coordination between FAA and MKAA/LPA going forth with the planning effort.
   - Schedule for projects.
   - Funding commitments.
2. FAA is currently pursuing the design for a new ALSAF 2 for RW 23R. Existing ALS is "piecemeal".
3. FAA is uncertain of the schedule for construction of the system.
4. The plan is for a total replacement for ALSAF 2 RW 23R and is estimated to be in the $3M range.
5. Mike R. requested detailed information on the new system.
6. Ed Carney is the FAA NAVAID engineer for the project and point of contact with the FAA for specific information on the replacement system. There should be existing drawings for the project.
7. Mike Reiter is the point of contact for LPA.
8. MKAA is confident that they will receive the funding for the reconstruction of the runway.
9. The current ALP for TYS indicates a future extension of 1,000' at the RW 5L end.
10. FAA NAVAIDS currently at TYS:
    - 5L VASI. FAA initiative ongoing to replace with a PAPI system.
    - 23R VASI. FAA initiative ongoing to replace with a PAPI system.
    - 5L CAT I ILS.
    - 23R CAT II ILS.
11. Glenn voiced concerns in pushing Washington to fund the ALSAF 2 replacement system, without a reasonable commitment to a schedule for the reconstruction of the RW 5L-23R. However, he could get this "on their radar" with a notification on intent to do something within 5 years, and then stay in touch from there.

- A goal should be to avoid moving or re-doing a new approach light system during runway reconstruction.
- Cost savings to the ALSAF 2 project is anticipated if the work is performed at the time that the runway is being reconstructed.
- A letter of agreement between the Airport Authority and the FAA is needed to obtain funding for the ALSAF 2 project.

12. Airfield impacts during reconstruction:
    - ILS systems will be down for approaches to closed RW5L-23R. Review of approach procedures should be made for possible use of existing ILS in an offset approach to RW5R-23L.
    - A review of operational conditions will need to be made to determine if the 350' RW5R-23L/TW'A' centerline separation is acceptable or requires changing for any instrument operations during the reconstruction period.
    - Mike R. described a possibility of hold bars back at the terminal apron for Group IV ILS operation as a avenue to manage the current 350' RW/TW separation.
    - Glenn F. related he could approach Ops Support and ADO personnel to inquire if something like that would be doable.
13. Glenn F. related he didn't believe FAA could fund any NAVAID improvements on RW5R-23L.
14. Glenn F. offered that from observation, site conditions for RW5R NAVAIDS indicates that the conditions could support the installation and operation of a Localizer, but could not support the installation and operation of a Glideslope due to terrain issues. RW 23L could potentially support both.
    - Glenn F. offered to send someone from FAA to look at it, but MKAA would need to pay for the site visit.

Action Items:

1. LPA/MKAA to provide FAA with refined RW 5L-23R profile at the completion of the current work authorization task.
2. Glenn to coordinate with Memphis ADO regarding procedures around the existing condition of the non-standard centerline separation between RW 5R-23L and TW 'A'.
3. LPA to prepare documents for a formal submittal to the FAA for a formal response, following 'official procedures'.

Prepared by
The LPA Group
8/24/2010

MCGHEE TYSON AIRPORT
RUNWAY 5L-23R RECONSTRUCTION PROGRAM

MEETING WITH AIR CARGO STAKEHOLDERS - SUMMARY

Date: September 30, 2010

Attendees:
Bryan White – MKAA
Eric Williamson – MKAA
Mike Reiter – LPA
Jeff Pike – LPA
Craig Davidson – UPS
Heather Tyks – MKAA
Jim Roberts – MKAA
Nick Karvelas – FedEx
John Baxter – FedEx

Purpose: Follow up meeting to the 7/27 TYS/FAA joint planning conference; To further discuss issues regarding the RW 5L-23R Reconstruction Program, particularly as they may or may not affect the Air Cargo tenants' operations. Through meetings, direct conversations and solicitation of comments, the design team aims to catalog and address all issues and concerns on Cargo operations so that they may be accounted for in future design decisions.

After a brief introduction to the project from Bryan White followed by a graphic presentation given by LPA to illustrate the RW Reconstruction Programs goals and objectives, the design team then opened the floor for a free-flowing discussion on the potential impacts the proposed construction may have on Cargo operations.

Comments:

15. ILS: Design team asked the Cargo Reps about operating without an ILS for the 8-12 month duration of construction. Both entities agreed they want and need a functional ILS on the 5R-23L RW to continue operations effectively.
16. Airfield Access: There is a desire to keep access to the 5R end during the construction without using TW A, which will cause multiple RW crossings as well as "mixing" with air carrier/GA ops on the TW A side. The idea of a TW connector from TW B1 to the RW 5R end was received well as a functional solution, but design team will need to look into its cost viability.
17. Airfield Access: Cargo Reps and Design team discussed phasing the RW 5L-23R Reconstruction to maintain access to the southeast (terminal) side of the airfield. It was also mentioned that at present, Cargo Ops have limited to no access on parallel TW G from G5/G6 westward (toward TANG apron) and that needed to be accounted for in any new ground flow simulations.
18. ILS: While design team noted that early estimations for a new ILS were based on the 5R approach, the Cargo reps indicated prevailing winds probably require a 23 approach. The design team indicated which end an ILS would be installed is not decided, but offered the 5R end was likely assumed due to the fewer obstructions and greater green space within the RPZ.

19. ILS: Cargo Reps indicated if an ILS is approved, a CAT II system is greatly preferred.
20. Staying in the Loop: The Cargo Reps indicated appreciation for being brought into the process in these early stages. The design team committed to send relevant updates and materials to those in attendance to keep line of communication open and move forward together.

Action Items:

4. LPA/MKAA to provide Cargo Reps with copy of power point presentation that outlines the scope/goals of the RW Programming effort.

Prepared by
The LPA Group
10/08/2010

MCGHEE TYSON AIRPORT
RUNWAY 5L-23R RECONSTRUCTION PROGRAM

MEETING WITH FAA-ATCT STAKEHOLDERS - SUMMARY

Date: October 1, 2010

Attendees:
Bryan White – MKAA
Eric Williamson – MKAA
Mike Reiter – LPA
Jeff Pike – LPA
Jim Roberts – MKAA
Tamera Easterday – FAA ATCT
Jerry Haynes – FAA ATCT

Purpose: Follow up meeting to the 7/27 TYS/FAA joint planning conference; To further discuss issues regarding the RW 5L-23R Reconstruction Program, particularly as they will affect procedures and movements given to pilots by ATCT during airfield operations. Through meetings, direct conversations and solicitation of comments, the design team aims to catalog and address all issues and concerns from ATCT and use the input for sound engineering decisions later.

After a brief introduction to the project from Bryan White followed by a graphic presentation given by LPA to illustrate the RW Reconstruction Programs goals and objectives, the design team then opened the floor for a free-flowing discussion on the potential impacts the proposed construction may have on ATCT's normal procedures.

Comments:

21. SRM: Ms. Easterday indicated that new project(s) will definitely be a test bed for the new FAA Order 5200.11 FAA Airports (ARP) Safety Management System (SMS), which "provides a consistent means of assessing safety risks. It does this through an integrated Safety Policy, a functioning Safety Risk Management (SRM) approach, a Safety Assurance model that identifies performance targets and facilitates continuous improvement, and a program of Safety Promotion, including clear communications" (from Order 5200.11). It was noted by everyone that when to "start" complying with the SMS order is hard to pin down. However it was concluded that since the size and true nature of this RW Program's scope is unknown, that any coordination on this topic at present might be unnecessary. However, design team is on board to comply with all aspects of the Order once the project(s) is (are) well defined.
22. ILS: ATCT indicated it would be very difficult to operate the airfield with no ILS available.
23. ILS: Design team asked about which end would be preferable for ILS placement. ATCT reps offered that wind patterns are pretty evenly split for each RW end, getting fairly close to a 50/50 usage window. However, it was

noted that TYS has many calm wind days which skews the usage percentages to the 23 end approach (this is the existing CAT II end).

24. ILS: Pro and cons were briefly discussed on which end to place an ILS for RW 5R-23L. It was mentioned that placing on the 5R end would be met with public opposition due to the houses within that approach. The 23 end approach would conflict with Alcoa Hwy and businesses underneath, but would likely avoid any disgruntled home owners.
25. ILS: Ms. Easterday asked the question "If the airlines don't get a CAT II approach ILS, will they even use it?" Design team agreed this is a key question to ask airline reps.
26. ILS: Discussion turned to the current GPS approach that RW 5R-23L currently has. ATCT asked if airlines would eventually be on board for a switch to GPS approaches. Again, design team agreed this is a key question to find out. And if they are on board to switch, what is their likely timetable? Jim Roberts interjected that he has discussed issue with regional airlines, and that they are NOT inclined to switch over. Mr. Roberts indicated he can try to ascertain the Cargo capabilities for this.
27. ILS: ATCT indicated that due to current RW separation (1,400'), airfield cannot function with simultaneous approaches, thus essentially making the airport a "one runway facility" anyway. A separation of 2,500' would be needed to allow simultaneous operations.
28. Airfield Access: Phasing the construction was discussed at length as ATCT pointed out the usual routes used to get aircraft to each of the RW ends. Access for Cargo and Military aircraft must be maintained during construction. ATCT also noted that west of G5/G6, they don't provide direction (TANG operates this area on their own).
29. Airfield Access: The topic of "airfield revitalization" was discussed. Since the program may provide opportunity to reconfigure some TWs, as well as demolish others, ATCT began to identify "hot spots" within the airfield. Three particular areas were identified as prone to incursions. As such, if the design team can address the hot spots within the RW Program design, it would benefit overall airfield safety.
30. Airfield Access: Overall ATCT indicated they are used to "adapting" to airfield conditions and providing the best service within that framework. ATCT seemed encouraged to be consulted on future improvements which will ultimately yield the new set of conditions from which they will operate under. The design team committed to keep ATCT in the loop on the program milestones and agreed to solicit ATCT opinion on future layouts.

Action Items:

5. LPA/MKAA to provide ATCT Reps with copy of power point presentation that outlines the scope/goals of the RW Programming effort.

Prepared by
The LPA Group
10/08/2010

MCGHEE TYSON AIRPORT
RUNWAY 5L-23R RECONSTRUCTION PROGRAM

MEETING WITH TENNESSEE NATIONAL GUARD STAKEHOLDERS - SUMMARY

Date: November 2, 2010

Attendees:

Bryan White (MKAA)	Ed Owenby (134 ARW)
Bryan Rollins (MKAA)	Lee Hartley (134 ARW)
Jim Roberts (MKAA)	Randy Gratz (134 ARW)
Eric Williamson (MKAA)	Elizabeth Hill (134 ARW)
Chico C.E. Messer (134 ARW)	Dennis Pack (MTAB, Mil. Police)
Wallace Houser (134 ARW)	Mike Reiter (LPA)
Gary Smith (134 ARW)	Jeff Pike (LPA)
Patrick Webb (134 ARW)	Jim Hall (LPA)

Purpose: Follow up meeting to the 7/27 TYS/FAA joint planning conference; To further discuss issues regarding the RUNWAY 5L-23R Reconstruction Program, particularly as they will affect operations of the Tennessee Air National Guard. Through meetings, direct conversations and solicitation of comments, the design team aims to catalog and address all issues and concerns from TNANG so that they may be accounted for in future design decisions.

After a brief introduction to the project from Bryan White followed by a graphic presentation given by LPA to illustrate the RUNWAY Reconstruction Programs goals and objectives, the design team then opened the floor for a free-flowing discussion on the potential impacts the proposed construction may have on TNANG's normal procedures. To aid the discussion, an agenda was distributed with the following topics:

I. ILS Needs
II. Taxiway Routing and/or Operational Needs
III. Possible use of Taxiway G during construction
IV. Possible change in Fleet Mix
V. Rehabilitation of Safety Overruns
VI. Runway Extension need & Funding

The assembled group discussed all the above listed topics in no particular order. A summation of the discussion follows.

Comments:

1. ILS: Mr. White began the discussion relating to ILS needs by describing the process the MKAA staff went through to establish an LPV approach on the 5R-23L Runway. At present, the main users of the airport (air carriers, cargo and military) do not utilize the LPV, but rather mostly use the conventional ILS on RUNWAY 5L-23R.
2. ILS: TNANG indicated they can RNAV, but only to the LNAV minimums, thus severely hampering their ability to operate in all conditions if the CAT II ILS on 23R is unavailable.
3. ILS: TNANG reps indicated that they absolutely need an ILS to maintain their normal operations. Otherwise, they would need to look into temporarily relocating some percentage of their fleet to another base.
4. Construction Time: LPA/MKAA estimated to the group that construction would likely take in the 9-12 month timeframe. This was provided as a reference point for TNANG.
5. ILS: TNANG noted that the coding on the RNAV approach (23L, 5L) is incompatible with the software on the TNANG planes.
6. ILS: Mr. Roberts (MKAA) asked if there is any military requirement for a land based approach as opposed to GPS (i.e. satellites go down b/c of catastrophic event, terrorism, etc.). TNANG said there is no such requirement.
7. ILS: The question was asked if pilots need the ILS for departures, or if they really only needed them for landings. TNANG indicated that they are useful for departures as well. *Note:* TNANG needs RVR for departure. Normally 1600RVR, but down to 1000RVR for emergencies.
8. ILS: It was noted that an ILS with approach lights would allow RVR requirements to have a lower setting. Additionally, the ALS (or lack thereof) certainly affects approach minimums.
9. Taxiway Routing: TNANG indicated that the day to day operations using the current Taxiway configuration in getting to RUNWAY 5R-23L would work fine (as long as access is maintained).
10. Taxiway Routing: TNANG did note however that during an unforeseen event or unusual RUNWAY access need, they may need to temporarily base closer to RUNWAY 5R-23L. The idea was discussed of using the large apron off Taxiway C as a temporary holding apron to serve this purpose.
11. Taxiway Routing: The concept of a connecting Taxiway between Taxiway B1 and the RUNWAY 5R threshold was discussed. TNANG very much liked the idea in theory (avoid mixing with commercial aircraft, no need to cross RUNWAY 5R-23L), but didn't know if their operations justified the expense. They related that most of their training exercises are 3 to 4 operations/day.
12. Use of Taxiway G: The subject of using Taxiway G as a full parallel Taxiway for Cargo users during the phased construction was brought up. TNANG related that it would be very difficult to allow Taxiway G use west/south of Taxiway G5 because of a myriad of security related factors. TNANG's preference is to not allow Taxiway G for this use during construction if possible.
13. Operational Weights: The normal day-day operating weight for KC135 is in the range of 150,000lbs – 170,000lbs. Maximum operating weight is 270,000lbs. for normal missions.

14. Change in Fleet Mix: From the FAA planning conference on 7/27, there was some discussion that a new plane or planes may be based at TYS in near future that may require more runway length. This was confirmed as still a possibility with the new aircraft(s) airframe similar to a B767 or A330.
15. RUNWAY Extension: Related to #14 above, 10,000' of RUNWAY is mentioned a lot when discussing new fleet or the rare occasions when the KC-135 needs to take off fully loaded. This would equate to a 1,000' extension as the current RUNWAY 5L-23R is 9,000'.
16. RUNWAY Extension: TNANG related that DOD is likely to support an extension financially if new aircraft are assigned to the base.
17. RUNWAY Extension: Even without a new aircraft, any extra take-off length (300'-500' mentioned) would help tremendously with capability according to TNANG.
18. Safety Overruns: TNANG expressed interest in reconstructing the safety overruns with full depth PCC. Additionally, the lighting in/around the overrun may need correcting. Mr. Roberts (MKAA) noted that the lights in the overrun area may need to burn red. TNANG indicated this work could be incorporated in a Military Construction Cooperation Agreement (MCCA). This would allow DOD funding for this portion of the project as it is implemented in concert with the FAA funded RUNWAY 5L-23R reconstruction.
19. Taxiway G1: TNANG brought up the condition/orientation of Taxiway G1 for consideration for improvements.
20. New Taxiway near RUNWAY 23R End: TNANG also discussed possibility of new connecting Taxiway, possibly from Taxiway B-8 to the extended RUNWAY 23R threshold. Again, since this would be effectively lengthening the RUNWAY 23R takeoff area (greater than 9,000'), FAA is not likely to support it, thus needing DOD funding. TNANG acknowledged and still left the possibility open.
21. Construction Material Recycling: TNANG inquired as to whether the demolished RUNWAY pavement would be recycled. LPA/MKAA indicated that while no specific design or construction decisions have been made yet, there is a general commitment to green initiatives on this program. Both TNANG and MKAA staff noted that they may have use for the demolished pavements.
22. Arming/De-Arming Pad: TNANG related that a pad dedicated to this purpose would be very useful for them. Specifically a pad large enough to accommodate 2 aircraft would be preferred. The pad would also need a vehicle access road to support the pad activities when in use. Team and stakeholders will look into further as program takes shape.
23. Streamlined Stakeholders Group: As the meeting drew to an end, Mr. White (MKAA) indicated that he may ask all of the different stakeholder groups to decide on a small number of representatives for future joint meetings. This will help keep the future meetings manageable as well as respect the fact that all groups are busy and don't need continued disruption to large portions of their workforce.

Appendix C: Other Reports

MEMORANDUM

TO: Mike Reiter and Jeff Pike, The LPA Group

FROM: Richard Osborne and Mike Kotlow, The LPA Group

SUBJECT: McGhee Tyson Airport (TYS), Runway 5L-23R Exit Taxiway Analysis

DATE: June 28, 2010

PROJECT DESCRIPTION

The Metropolitan Knoxville Airport Authority (MKAA) contracted The LPA Group to redesign the main runway (Runway 5L-23R) at McGhee Tyson Airport (TYS) in order to correct nonstandard elements related to FAA criteria for surface gradient and line of sight requirements. Because the entire runway would ultimately be reconstructed, it was decided by airport management that the location of exit taxiways also be re-evaluated during this effort. Hence, as a planning subtask to the engineering element, a "blank slate" analysis of potential exit taxiway locations was undertaken which considered ongoing activity trends at TYS, maximization of airfield capacity, and FAA recommendations for preventing runway incursions.

FAA Advisory Circular *AC 150/5300-13 Airport Design* provides guidance for determining the appropriate taxiway exit locations based on the different weight categories of aircraft that operate at a particular airport. Although this level of analysis is deemed acceptable by the FAA, it does not consider the actual performance of each aircraft type that regularly operates at a particular airport. A review of TYS's operational activity during 2009 was conducted to identify the airport's critical fleet. Afterwards, the landing performance for each type of aircraft was determined by reviewing performance charts for each aircraft model under two types of payload scenarios - 80% and 100% of maximum landing weight during wet and dry conditions. As a result, an alternate and perhaps more precise method of establishing the taxiway exit locations at TYS was developed.

This analysis utilized FAA Advisory Circulars (AC), Orders, and Engineering Briefs (EB), as well as planning-level aircraft performance data, to determine preferred exit taxiway locations along Runway 5L-23R (following reconstruction). However, such a "literature review" should not be viewed as the sole siting criteria for exit taxiways. This analysis should be used to facilitate discussions between project engineers, the MKAA, key airport users (airlines, military, cargo, general aviation, etc.), and personnel from the TYS Air Traffic Control Tower (ATCT). Therefore, an ultimate exit taxiway plan can be developed that balances the desires of airport stakeholders while evaluating: 1) FAA funding limitations, 2) the possibility of preserving existing taxiway pavements, 3) aircraft access to airport facilities, 4) potential long-term airfield improvements, and 5) development constraints (terrain, navaid impacts, etc.).

The following sections of this memo present the findings of the exit taxiway analysis for Runway 5L-23R:

- **FAA Engineering Brief No. 75 (EB-75) Design Recommendations**
- **TYS Analysis of Existing Activity (Table 1)**
- **FAA Airport Design Exit Taxiway Analysis (Table 2)**
- **TYS Critical Aircraft Landing Performance Analysis (Table 3)**
- **Exit Taxiway Analysis Summary (Table 4 and Figure 1)**

FAA ENGINEERING BRIEF NO. 75 (EB-75) DESIGN RECOMMENDATIONS

FAA EB-75, *Incorporation of Runway Incursion Prevention into Taxiway and Apron Design*, provides guidance on design strategies of taxiways and aprons to help prevent runway incursions (*the FAA defines a "runway incursion" as any unauthorized intrusion onto a runway, regardless of whether or not an aircraft presents a potential conflict*). According to EB-75, "these design strategies are only recommendations. They are not a set of standards that must be followed whenever possible. Airfield design is often a process that must balance safety, efficiency, capacity, and other factors. There will be cases where the strict application of these recommendations is unjustified and unwise. Instead, use the recommendations as a checklist to insure the runway incursion aspects of any design proposal are properly considered."

- Limit the number of aircraft crossing an active runway
    - The preference is for aircraft to cross in the last third of the runway whenever possible, since within the middle third of the runway the arriving/departing aircraft is usually on the ground and traveling at a high rate of speed
- Optimize pilots' recognition of entry to the runway (increase situational awareness) through design of taxiway layout, for example:
    - Use a right angle for taxiway-runway intersections (except for high speed exits)
    - Limit the number of taxiways intersecting in one spot
    - Avoid wide expanses of pavement at runway entry
- Insure the taxiway layouts take operational requirements and realities into account to:
    - Safely and efficiently manage departure queues
    - Avoid using runways as taxiways
    - Use taxiway strategies to reduce the number of active runway crossings
    - Correct runway incursion "hot spots"

EB-75 presents several additional design recommendations for preventing runway incursions. The recommendations of EB-75 were incorporated herein to provide a safe and simple airfield environment at TYS. However, because this exit taxiway analysis was conducted without detailed understanding of existing and future airfield capacity concerns, exceptions to the EB-75 recommendations may ultimately be considered during the design phase of the Runway 5L-23R reconstruction. For example, although this memo only addresses the implementation of right angled exit taxiways (per the recommendations of EB-75), the need for potential capacity enhancing projects such as high-speed exits and bypass taxiways should be discussed with airport stakeholders. A copy of EB-75 is provided at the end of this memo for reference.

TYS ANALYSIS OF EXISTING ACTIVITY (TABLE 1)

According to the FAA's Operations Network (OPSNET) database, a total of 103,644 operations were recorded at TYS in 2009 as shown in **Table 1**. Based on airline and cargo reports from the Bureau of Transportation Statistics (BTS) Air Carrier Statistics (Form 41) database for U.S. carriers (T-100 Domestic Segment), the OPSNET data was further broken down by common user classes (airline, cargo, military, other air taxi, and general aviation). Of the two parallel runways (Runways 5L-23R and 5R-23L), Runway 5L-23R (i.e., the furthest from the passenger terminal building) is most utilized for aircraft landings due to the presence of precision ILS approaches to both runway ends.

TABLE 1
TYS ANALYSIS OF EXISTING ACTIVITY (YEAR 2009)

FAA OPSNET DATA (YEAR 2009)								
ITINERANT OPERATIONS					LOCAL OPERATIONS			TOTAL
AIR CARRIER	AIR TAXI	GENERAL AVIATION	MILITARY	TOTAL	CIVIL	MILITARY	TOTAL	OPERATIONS
9,953	41,334	31,228	9,814	92,329	6,521	4,794	11,315	103,644

BREAKDOWN BY USER CLASS (YEAR 2009)	
AIRLINE OPERATIONS	42,147
CARGO OPERATIONS	2,354
MILITARY OPERATIONS	14,608
OTHER AIR TAXI OPERATIONS	6,786
GENERAL AVIATION OPERATIONS	37,749
TOTAL OPERATIONS	103,644

SOURCES: FAA OPSNET DATABASE, BTS FORM 41 DATABASE (T-100 DOMESTIC SEGMENT), AND THE LPA GROUP INCORPORATED, JUNE 2010.

The FAA defines airfield capacity as an estimate of aircraft that can be processed through the airfield system during a specific period with acceptable levels of delay. **FAA AC 150/5060-5**, *Airport Capacity and Delay*, presents the methodology for calculating airfield capacity. This methodology does not account for every possible situation at an airport, but rather the most common situations observed at U.S. airports when the *Capacity AC* was adopted. Although no updated airfield capacity analysis was conducted for TYS at this time, it is noted that all calculations in the *Capacity AC* are maximized when a runway has four or more exit taxiways (including the end connectors). As such, the reconstructed Runway 5L-23R should be designed with a minimum of four exit taxiways on each side (including the end connectors) for TYS to be capable of achieving the service levels defined in the *Capacity AC*.

Exit taxiways should be sited minimize runway occupancy time for frequently utilized aircraft. Thus, from a "blank slate" perspective, exit taxiway siting should include a review of the following: 1) general aircraft landing distances from **FAA AC 150/5300-13**, *Airport Design*, 2) TYS activity and the associated landing lengths of critical aircraft, and 3) comparing the previous reviews to the design recommendations in EB-75 to determine preferred exit taxiway locations along Runway 5L-23R.

FAA AIRPORT DESIGN EXIT TAXIWAY ANALYSIS (TABLE 2)

According to the *Airport Design AC*, **Table 2** below "presents cumulative percentages of airplanes observed exiting existing runways at specific exit taxiway locations. In general, each 100-foot reduction of the distance from the threshold to the exit taxiway reduces the runway occupancy time by approximately ¾ of a second for each airplane using the exit. Conversely, the runway occupancy time of each airplane now overrunning the new exit location is increased by approximately ¾ of a second for each 100 feet from the old location to the next available exit." The A, B, C, and D categories in the table represent the following aircraft weights:

- A – Small, single engine – 12,500 pounds or less
- B – Small, twin engine – 12,500 pounds or less
- C – Large – 12,500 to 300,000 pounds
- D – Heavy – 300,000 pounds or more

Because every airline aircraft that operates at TYS falls into the C category, the *Airport Design AC* indicates that 100 percent of this category would be accommodated by exit taxiways located 8,000 feet from threshold for wet runways, 7,000 feet from threshold for dry runways and right angled exits, and 6,500 from threshold for dry runways and acute angled exits. Some larger cargo and military aircraft that operate at TYS fall into the D category, which the *Airport Design AC* suggests require slightly more length for exiting the runway than C category aircraft. Please note that these exit lengths (from the *Airport Design AC*) do not represent design requirements, just typical values for planning purposes. As such, this information is compared to actual TYS activity and critical aircraft landing lengths in the next section.

TABLE 2 EXIT TAXIWAY CUMULATIVE UTILIZATION PERCENTAGES (AIRPORT DESIGN)												
DISTANCE THRESHOLD TO EXIT	WET RUNWAYS				DRY RUNWAYS							
	RIGHT & ACUTE ANGLED EXITS				RIGHT ANGLED EXITS				ACUTE ANGLED EXITS			
	A	B	C	D	A	B	C	D	A	B	C	D
0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
500	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%
1,000	4%	0%	0%	0%	6%	0%	0%	0%	13%	0%	0%	0%
1,500	23%	0%	0%	0%	39%	0%	0%	0%	53%	0%	0%	0%
2,000	60%	0%	0%	0%	84%	1%	0%	0%	90%	1%	0%	0%
2,500	84%	1%	0%	0%	99%	10%	0%	0%	99%	10%	0%	0%
3,000	96%	10%	0%	0%	100%	39%	0%	0%	100%	40%	0%	0%
3,500	99%	41%	0%	0%	100%	81%	2%	0%	100%	82%	9%	0%
4,000	100%	80%	1%	0%	100%	98%	8%	0%	100%	98%	26%	3%
4,500	100%	97%	4%	0%	100%	100%	24%	2%	100%	100%	51%	19%
5,000	100%	100%	12%	0%	100%	100%	49%	9%	100%	100%	76%	55%
5,500	100%	100%	27%	0%	100%	100%	75%	24%	100%	100%	92%	81%
6,000	100%	100%	48%	10%	100%	100%	92%	71%	100%	100%	98%	95%
6,500	100%	100%	71%	35%	100%	100%	98%	90%	100%	100%	100%	99%
7,000	100%	100%	88%	64%	100%	100%	100%	98%	100%	100%	100%	100%
7,500	100%	100%	97%	84%	100%	100%	100%	100%	100%	100%	100%	100%
8,000	100%	100%	100%	93%	100%	100%	100%	100%	100%	100%	100%	100%
8,500	100%	100%	100%	99%	100%	100%	100%	100%	100%	100%	100%	100%
9,000	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
100% DISTANCE	**A**	**B**	**C**	**D**	**A**	**B**	**C**	**D**	**A**	**B**	**C**	**D**
	4,000	**5,000**	**8,000**	**9,000**	**3,000**	**4,500**	**7,000**	**7,500**	**3,000**	**4,500**	**6,500**	**7,000**

SOURCE: FAA AC 150/5300-13, AIRPORT DESIGN, TABLE A9-1.
A – SMALL, SINGLE ENGINE – 12,500 POUNDS OR LESS
B – SMALL, TWIN ENGINE – 12,500 POUNDS OR LESS
C – LARGE – 12,500 TO 300,000 POUNDS
D – HEAVY – 300,000 POUNDS OR MORE

TYS CRITICAL AIRCRAFT LANDING PERFORMANCE ANALYSIS (TABLE 3)

Actual aircraft operating characteristics are the most important factor in determining exit taxiway locations along a runway. As previously mentioned, the BTS reported 42,147 airline operations and 2,354 cargo operations at TYS in 2009. This information is further broken down by aircraft type in **Table 3**, with landing length requirements provided for maximum landing weight (MLW) and 80 percent of MLW – 80 percent of MLW was selected to represent a potentially common landing scenario at TYS (although unconfirmed) . The landing lengths shown are already factored in accordance with the Federal Aviation Regulations (FAR) requirement for commercial aircraft to land within 60 percent of the available runway length. However, the values only account for landings when the temperature is 59° Fahrenheit, and do not account for other factors which may affect landings at a specific airport such as wind velocity, effective runway gradient, presence of obstructions, locally imposed noise abatement restrictions, or other prohibitions.

For aircraft that conducted more than 100 operations at TYS in 2009, **Table 3** identifies a maximum landing length requirement of 6,000 feet for wet runways at 100 percent MLW, 5,200 feet for dry runways at 100 percent MLW, 5,300 feet for wet runways at 80 percent MLW, and 4,700 feet for dry runways at 80 percent MLW. Therefore, 6,000 feet was the longest landing length requirement identified for airline and cargo aircraft that conducted more than 100 operations at TYS in 2009. It is further noted that under dry runway conditions at 80 percent MLW, nearly every aircraft shown can land within half the length of Runway 5L-23R (approximately 4,500 feet). Accommodating these specific landing length requirements for TYS' critical aircraft should be the highest priority for exit taxiway siting.

EXIT TAXIWAY ANALYSIS SUMMARY (TABLE 4 AND FIGURE 1)

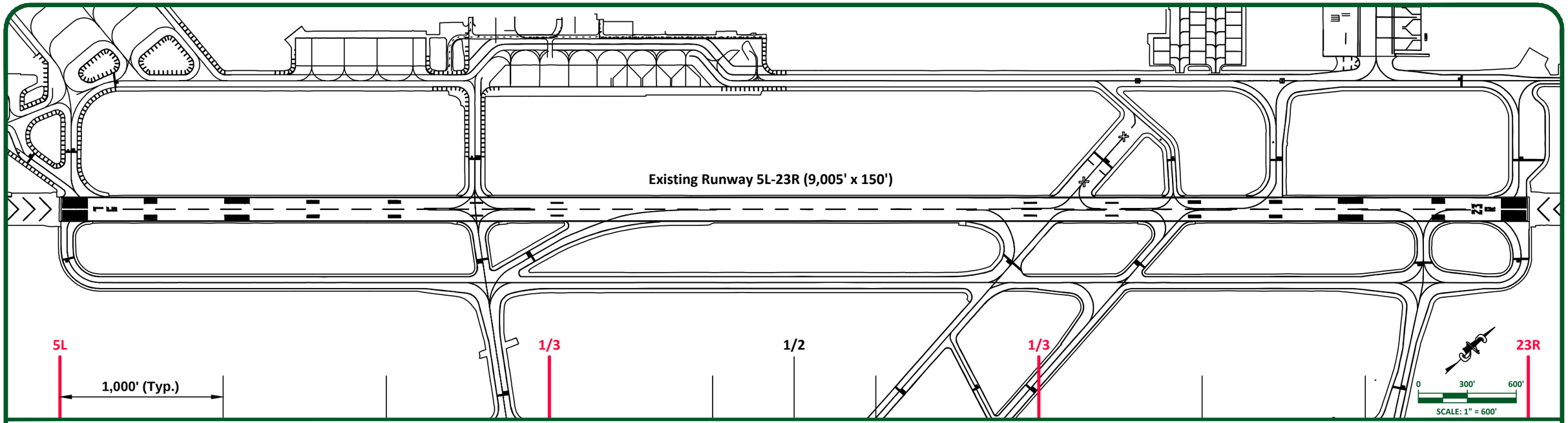
Through a review of actual TYS activity in 2009, it was found that 6,000 feet was the longest landing length requirement of the most common airline and cargo aircraft at MLW. However, the *Airport Design AC* indentifies 6,500 feet as the minimum exit taxiway distance from runway threshold for accommodating 100 percent of C category aircraft. Further, nearly every aircraft shown in **Table 3** can land within half the length of Runway 5L-23R under dry runway conditions at 80 percent MLW. In order to optimize pilots' situational awareness when capacity is not a significant factor, EB-75 recommends using right angles for taxiway-runway intersections (except for high speed exits), and also not to provide runway crossings in the middle third of a runway. Considering these factors in a "blank slate" environment, **Figure 1** illustrates a potential exit taxiway configuration for the reconstructed **Runway 5L-23R**. It is noted that configuration does not account for capacity-enhancing improvements like high speed exits and bypass taxiways. **Table 4** presents characteristics of the depicted exit taxiways.

TABLE 3
TYS AIRLINE & CARGO AIRCRAFT LANDING LENGTH REQUIREMENTS

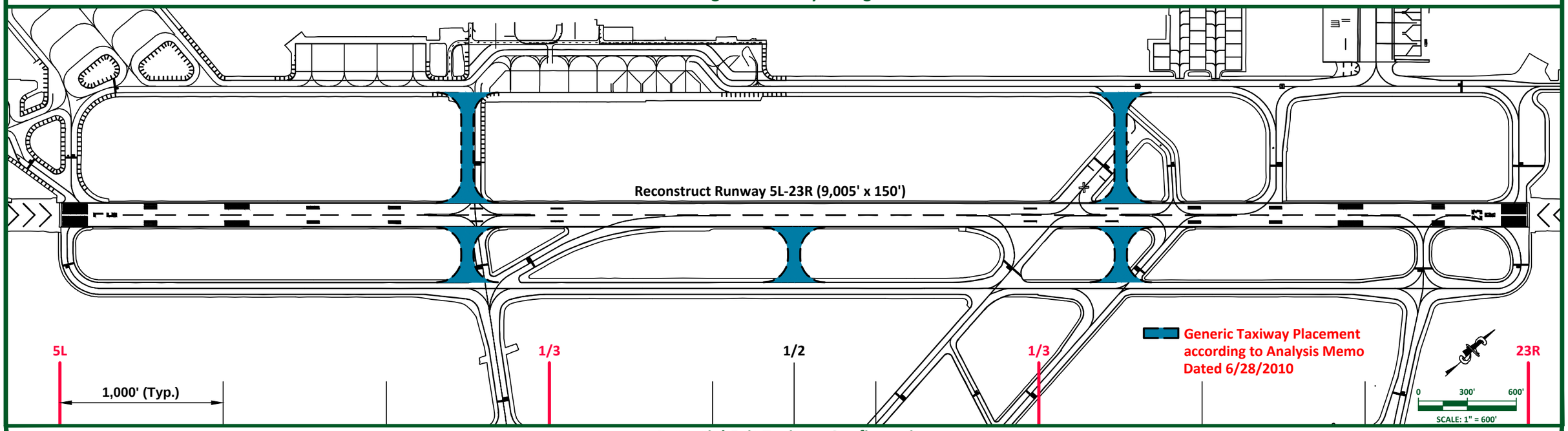
AIRLINE & CARGO AIRCRAFT (REPORTED BY BTS)	TYS 2009 OPS (PER BTS)	% OF BTS OPS	OPS RANK	PRIMARY CLASS	MTOW	CAPACITY CATEGORY	MLW	80% MLW	LANDING (LD) LENGTH REQUIREMENTS				LANDING (LD) SOURCE DATA
									WET RWY (100% MLW)	DRY RWY (100% MLW)	WET RWY (80% MLW)	DRY RWY (80% MLW)	
AIRLINE & CARGO AIRCRAFT WITH MORE THAN 100 OPERATIONS IN 2009 (DATA PROVIDED FOR ALL AIRCRAFT)													
CANADAIR RJ-200ER /RJ-440	18,592	41.78%	1	PASSENGER	51,000	C	47,000	37,600	5,750	5,000	4,945	4,300	BOMBARDIER, CF34-3A1 ENG, FAR LD, 981' AMSL, STD, 45° FLAPS
EMBRAER-145	13,643	30.66%	2	PASSENGER	48,501	C	42,549	34,039	5,282	4,593	UNKNOWN	UNKNOWN	EMBRAER, 145 LR MODEL, FAR LD, 0' AMSL, STD, MAX FLAPS
CANADAIR RJ-700	3,070	6.90%	3	PASSENGER	73,000	C	67,000	53,600	5,635	4,900	4,830	4,200	BOMBARDIER, 701 MODEL, FAR LD, 981' AMSL, STD, 45° FLAPS
MCDONNELL DOUGLAS DC9 SUPER 80	1,661	3.73%	4	PASSENGER	149,500	C	130,000	104,000	5,500	4,900	5,000	4,400	BOEING, MD-88, FAR LD, 981' AMSL, STD, 40° FLAPS
CANADAIR CRJ 900	1,350	3.03%	5	PASSENGER	80,500	C	73,500	58,800	5,980	5,200	5,175	4,500	BOMBARDIER, 900 MODEL, FAR LD, 981' AMSL, STD, 45° FLAPS
AIRBUS INDUSTRIE A310-300	1,059	2.38%	6	CARGO	337,304	D	271,166	216,933	5,980	5,200	4,830	4,200	AIRBUS, JT9D ENG, FAR LD, 981' AMSL, STD, 40° FLAPS
DEHAVILLAND DHC8-300 DASH 8	992	2.23%	7	PASSENGER	41,100	C	40,000	32,000	4,025	3,500	3,450	3,000	BOMBARDIER Q300, BASIC, 60% FACTOR, 981' AMSL, STD, 35° FLAPS
CANADAIR RJ-100/RJ-100ER	874	1.96%	8	PASSENGER	47,450	C	44,700	35,760	5,750	5,000	4,945	4,300	BOMBARDIER, CF34-3A1 ENG, FAR LD, 981' AMSL, STD, 45° FLAPS
EMBRAER 170	705	1.58%	9	PASSENGER	85,098	C	73,414	58,731	4,807	4,180	UNKNOWN	UNKNOWN	EMBRAER, 170 AR MODEL, FAR LD, 0' AMSL, STD, MAX FLAPS
BOEING 757-200	610	1.37%	10	CARGO	255,000	C	210,000	168,000	6,000	5,200	5,000	4,300	BOEING, PW2037 ENG, FAR LD, 981' AMSL, STD, 30° FLAPS
AIRBUS INDUSTRIE A300-600	387	0.87%	11	CARGO	375,890	D	308,650	246,920	5,980	5,200	4,830	4,200	AIRBUS, PW4158 ENG, FAR LD, 981' AMSL, STD, 40° FLAPS
EMBRAER-140	386	0.87%	12	PASSENGER	44,312	C	41,226	32,981	5,207	4,528	UNKNOWN	UNKNOWN	EMBRAER, 140 ER MODEL, FAR LD, 0' AMSL, STD, MAX FLAPS
DEHAVILLAND DHC8-100 DASH-8	335	0.75%	13	PASSENGER	41,100	C	40,000	32,000	4,025	3,500	3,450	3,000	BOMBARDIER Q300, BASIC, 60% FACTOR, 981' AMSL, STD, 35° FLAPS
BOEING 727-200/231A	239	0.54%	14	CARGO	184,800	C	154,500	123,600	5,500	4,700	4,500	3,800	BOEING, ADVANCED MODEL, CAR LD, 981' AMSL, STD, 40° FLAPS
BOEING 717-200	232	0.52%	15	PASSENGER	121,000	C	121,000	96,800	5,600	4,800	5,300	4,700	BOEING, BR715 ENG, FAR LD, 981' AMSL, STD, 40° FLAPS
EMBRAER-135	112	0.25%	16	PASSENGER	41,887	C	40,785	32,628	5,131	4,462	UNKNOWN	UNKNOWN	EMBRAER, 135 ER MODEL, FAR LD, 0' AMSL, STD, MAX FLAPS
AIRLINE & CARGO AIRCRAFT WITH LESS THAN 100 OPERATIONS IN 2009 (DATA PROVIDED FOR SELECT BOEING AIRCRAFT)													
BOEING 737-100/200	57	0.13%	17	PASSENGER									
MCDONNELL DOUGLAS DC-8-73	38	0.09%	18	CARGO									
BOEING 737-800	31	0.07%	19	PASSENGER	174,200	C	146,300	117,040	6,400	5,500	5,200	4,500	BOEING, FAR LD, 981' AMSL, STD, 40° FLAPS
MCDONNELL DOUGLAS DC-9-40	22	0.05%	20	CARGO									
BOEING 737-400	13	0.03%	21	PASSENGER	150,000	C	124,000	99,200	6,000	5,200	5,000	4,200	BOEING, FAR LD, 981' AMSL, STD, 40° FLAPS
BOEING 767-300/300ER	13	0.03%	21	CARGO	412,000	D	326,000	260,800	6,500	5,700	5,500	4,900	BOEING, FREIGHTER MODEL, FAR LD, 981' AMSL, STD, 30° FLAPS
MCDONNELL DOUGLAS DC-9-15F	12	0.03%	23	CARGO									
MCDONNELL DOUGLAS DC-9-30	12	0.03%	23	CARGO									
MCDONNELL DOUGLAS DC-8-71	11	0.02%	25	CARGO									
DORNIER 328	7	0.02%	26	PASSENGER									
BOEING 737-700	6	0.01%	27	PASSENGER	154,500	C	129,200	103,360	5,500	4,800	4,500	4,000	BOEING, FAR LD, 981' AMSL, STD, 40° FLAPS
CESSNA 208 CARAVAN	5	0.01%	28	CARGO									
AIRBUS INDUSTRIE A320-100/200	4	0.01%	29	PASSENGER									
CONVAIR CV-580	4	0.01%	29	PASSENGER									
EMBRAER 190	4	0.01%	29	PASSENGER									
BOEING 737-500	3	0.01%	32	PASSENGER	150,000	C	110,000	88,000	5,200	4,500	4,500	3,900	BOEING, FAR LD, 981' AMSL, STD, 40° FLAPS
BEECHCRAFT BEECH 18 C-185	2	0.00%	33	PASSENGER									
DASSAULT-BREGUET MYSTERE-FALCON	2	0.00%	33	CARGO									
EMBRAER ERJ-175	2	0.00%	33	PASSENGER									
GULFSTREAM AEROSPACE G-IV	2	0.00%	33	PASSENGER									
MCDONNELL DOUGLAS MD-90	2	0.00%	33	PASSENGER									
AIRBUS A330-300	1	0.00%	38	PASSENGER									
BOEING 767-400/ER	1	0.00%	38	PASSENGER	450,000	D	350,000	280,000	7,200	6,300	6,200	5,300	BOEING, ER MODEL, FAR LD, 981' AMSL, STD, 30° FLAPS
GRAND TOTAL	**44,501**	**100.00%**											

SOURCES: BTS FORM 41 DATABASE (T-100 DOMESTIC SEGMENT) AND THE LPA GROUP INCORPORATED, JUNE 2010.
NOTES: THIS TABLE INCLUDES AIRLINE AND CARGO OPERATIONS REPORTED TO THE BTS AND IS THEREFORE NOT INCLUSIVE OF ALL OPERATIONS AT TYS. AIRCRAFT WEIGHTS AND LANDING LENGTH REQUIREMENTS SHOWN MAY NOT ACCURATELY REPRESENT MODELS OPERATING AT TYS.

TABLE 4 POTENTIAL EXIT TAXIWAYS					
POTENTIAL EXIT TAXIWAY	**APPROX. DISTANCE FROM THRESHOLD**		**PURPOSE FOR LANDINGS**		**POTENTIAL MOVEMENT**
	RUNWAY 5L	**RUNWAY 23R**	**RUNWAY 5L**	**RUNWAY 23R**	
EXIT 1	6,500'	2,500'	ACCOMMODATES MAX EXIT DISTANCE FOR ALL CRITICAL AIRLINE AND CARGO AIRCRAFT	ACCOMMODATES SMALL AIRCRAFT	MAY BE MOVED AS FAR AS THE 1/3 RUNWAY MARK
EXIT 2	6,500'	2,500'	ACCOMMODATES IDEAL EXIT DISTANCE FOR CRITICAL CARGO AIRCRAFT	LIMITED USE	
EXIT 1 & 2 COMBINED	6,500'	2,500'	PROVIDES A RUNWAY CROSSING OUTSIDE THE MIDDLE THIRD OF THE RUNWAY		
EXIT 3	4,500'	4,500'	IDEAL EXIT POINT FOR TYPICAL AIRLINE OPERATIONS AT TYS		N/A
EXIT 4	2,500'	6,500'	LIMITED USE	BASED ON ALIGNMENT WITH TAXIWAY G4, APPEARS TO PROVIDE IDEAL EXIT FOR MILITARY AIRCRAFT	MAY BE MOVED AS FAR AS THE 1/3 RUNWAY MARK
EXIT 5	2,500'	6,500'	ACCOMMODATES SMALL AIRCRAFT	ACCOMMODATES MAX EXIT DISTANCE FOR ALL CRITICAL AIRLINE AND CARGO AIRCRAFT	
EXIT 4 & 5 COMBINED	2,500'	6,500'	PROVIDES A RUNWAY CROSSING OUTSIDE THE MIDDLE THIRD OF THE RUNWAY		
SOURCE: THE LPA GROUP INCORPORATED, JUNE 2010.					



Existing Exit Taxiway Configuration



Potential Exit Taxiway Configuration

McGhee Tyson Airport
Runway Reconstruction
Programming and Development Report

Runway 5L-23R
Exit Taxiway Analysis

Figure 7

McGhee Tyson Airport
Runway 5R-23L Rehabilitation Needs Assessment

I. INTRODUCTION:

When Runway 5L-23R is taken out of service for reconstruction, all aircraft arrival and departure operations at the airport including commercial, general aviation, cargo and military, will use Runway 5R-23L exclusively. The estimated period of time for the exclusive use of Runway 5R-23L is 9-12 months, depending on project phasing and funding decisions.

The LPA Group has performed a preliminary evaluation and analysis of Runway 5R-23L pavement to assess the performance capability during the period of exclusive use. This evaluation and analysis included a review of the pavement construction history, visual inspection of the runway surface in December 2010, review of the 2008 and 2011 PCI survey results, and structural analysis using the FAA software FAARFIELD.

The effort has focused on Runway 5R-23L. However consideration of rehabilitation needs should also be given to Taxiway 'A'.

II. PAVEMENT EVALUATION:

A. Construction History:

Runway 5R-23L has been improved at different times throughout its life since its original construction in 1944. The last construction record for the runway occurred in 1999. The runway consists of five unique pavement sections, as depicted in the 1995 Pavement Maintenance Management Program, as well as project records from the 1998 Runway Overlay project. According to this data, the first 3,000 feet from the 5R end (the 1988 RW extension) appears to have the thinnest section when compared to the other 4 pavement sections.

B. Visual Inspection:

A visual inspection of the runway surface was conducted in December, 2010. At that time, the pavement surface was showing distresses in various forms of cracking. Cracks in the first 3,000 feet from the 5R end (the 1989 extension) are predominantly longitudinal separation of the pavement joints. Cracks in the remaining 6,000 feet of the runway vary in type and extent including joint cracking, block cracking, and possibly reflective cracking from underlying concrete pavement. Cracks such as alligator fatigue cracking, slippage cracks, and settlement were not detected.

Some narrowly spaced longitudinal parallel cracking was observed, both at intersection joints with connecting taxiways, and within the width of the runway. Transverse cracks were also observed. The majority of the cracks had not been treated.

Pictures of samples of the observed distresses are included as Figures 1 - 26 of this report.
A visual inspection of Taxiway 'A' was not conducted.

Figure 1
Longitudinal Crack, RW5R Threshold
8499

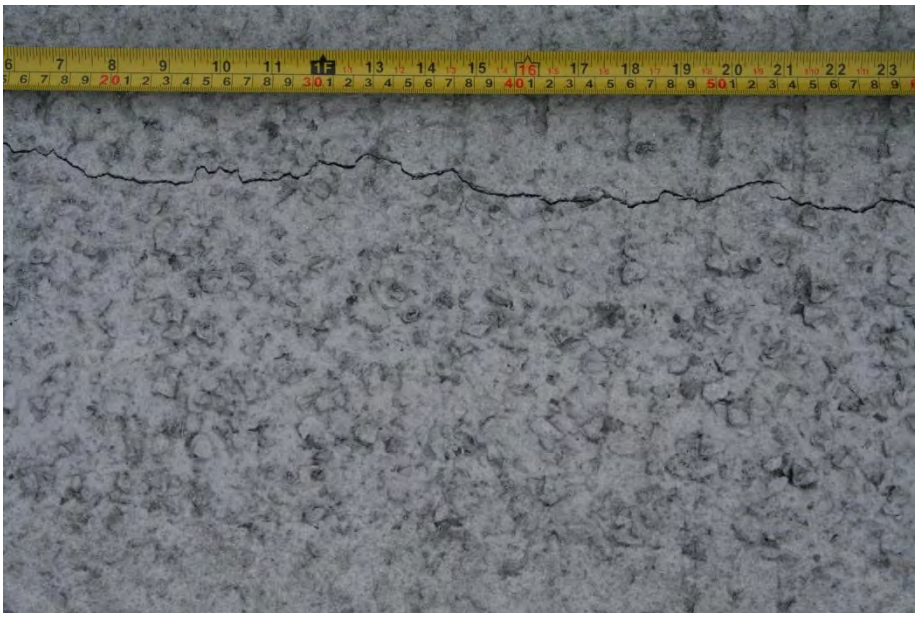


Figure 2
Longitudinal Crack, RW 5R Threshold
8501

Figure 3
Longitudinal Crack RW5R Touchdown Zone Area, Left
8512

Figure 4
Longitudinal Cracks 15+00
8513

Figure 5
RW5R Touchdown Zone Area
8516

Figure 6
Longitudinal Crack 35+00
8518

Figure 7
Lane and Distress Cracking Near TW B2 35+00
8523

Figure 8
Transverse Crack Mid-Way Between TW A4 and TW A5 45+00
8738

Figure 9
Longitudinal and Distress Cracks 55+00
8539

Figure 10
Longitudinal Cracks 55+00
8540

Figure 11
Longitudinal Cracks 55+00
8541

Figure 12
Longitudinal and Distress Cracks 55+00
8542

Figure 13
Longitudinal Cracks 55+00
8543

Figure 14
Distress Cracks 58+00
8544

Figure 15
Cracks with Popouts 58+00
8562

Figure 16
Cracks with Popouts 58+00
8563

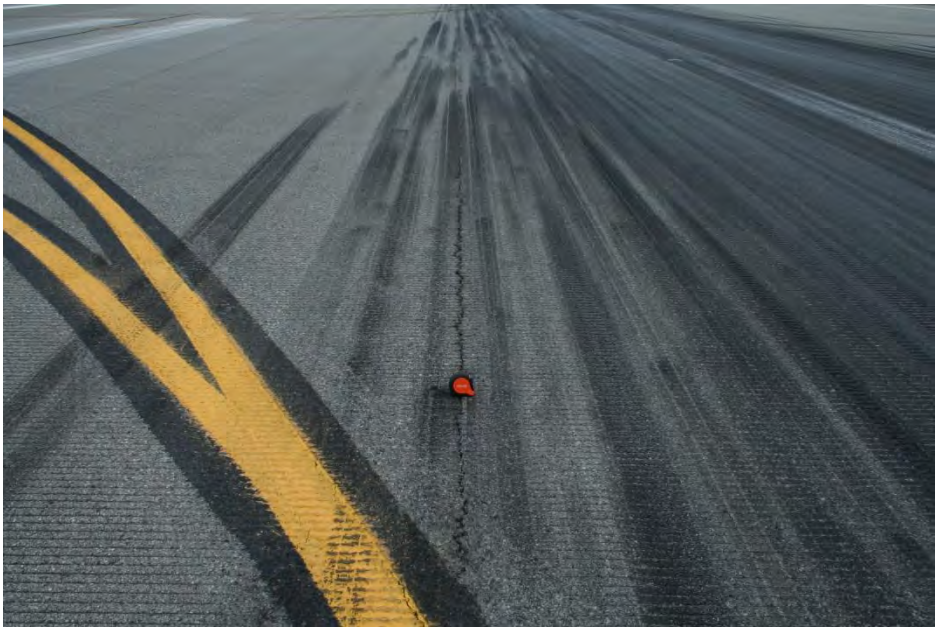


Figure 17
Longitudinal Cracks 58+00
8573

Figure 18
Longitudinal Cracks 58+00
8574

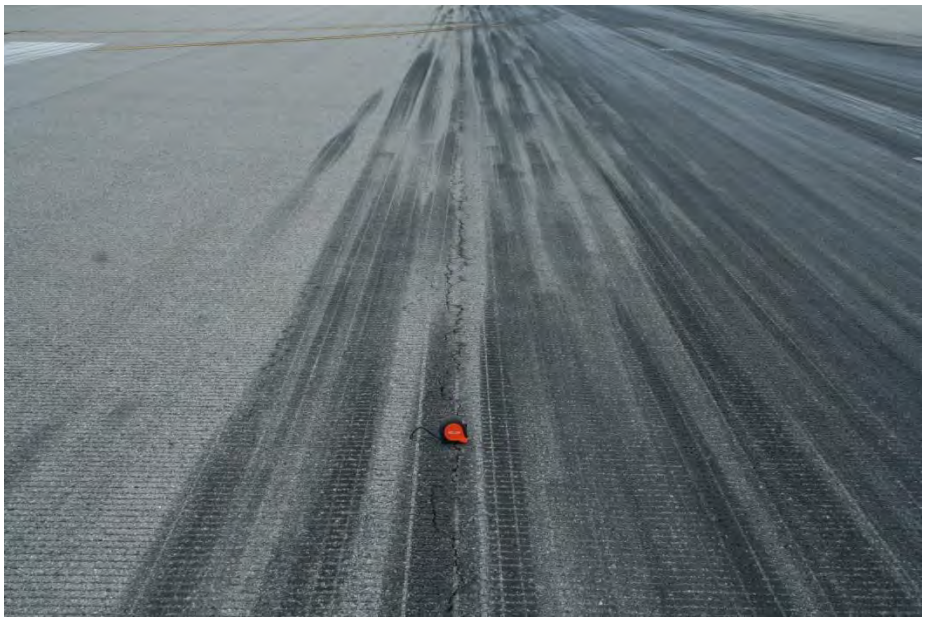


Figure 19
Longitudinal Cracks 60+00
8575

Figure 20
Longitudinal and Distress Cracks 60+00
8577

Figure 21
Longitudinal Cracks 78+00
8578

Figure 22
Longitudinal Cracks 78+00
8579

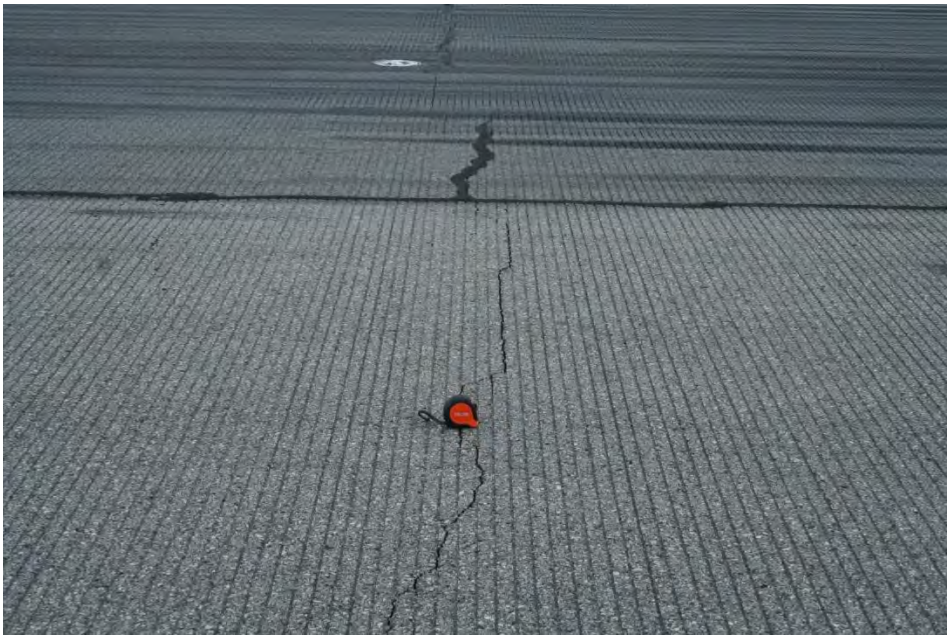


Figure 23
Transverse Crack 78+00
8583

Figure 24
Double Crack 84+00
8585

Figure 25
Longitudinal Cracks 87+00
8594

Figure 26
Surface Burn 89+00
8588

C. PCI Review:

The PCI reports for 2008 and 2011 indicated PCI values for Runway 5R-23L as having an average of 87.19, and 90.71, which place the average condition of the runway surface in the 'Good' range. However, the 2008 information reported values for sections of the pavement in the vicinity of the intersection with Taxiways A5/A6, and B5, and at other locations between Taxiways A3 and A7 in the low – mid 'Satisfactory' range.

The observations from the visual inspection of the runway pavement surface are reasonably consistent with the PCI results.

The PCI ratings for the Taxiway 'A' pavement surface is rated as Good. However, there are segments rated as Fair such as 2,150 linear feet adjacent to the Terminal Ramp, and 200 linear feet adjacent to Taxiway 'A3'.

D. FAARFIELD Analysis:

In addition to the visual assessments discussed previously, an evaluation of the structural capacity of the runway to accommodate the proposed aircraft loadings during the Runway 5L-23R closure period has also been performed utilizing the FAA-FAARFIELD software. Utilizing the 2004 Master Plan Update prepared by Wilbur Smith and Associates, an aircraft fleet mix was calculated for use in the FAARFIELD analysis. The aircraft data and fleet mix calculations follow in the section titled "Fleet Mix Calculation".

Using the aircraft mix referenced above, the 5 unique pavement sections of RW 5R-23L were analyzed on their structural capacity to withstand all operations during the RW 5L-23R shutdown period. All of the pavement sections analyzed maintain enough pavement section thickness to perform during the shutdown according to FAARFIELD. The newest section of runway, consisting of the 3,000LF extension built in 1989, was of particular concern because it was the thinnest of the 5 pavement sections analyzed. The FAARFIELD output for the extension section can be found within the section titled "Pavement Design Outputs", **Table 1**.

FLEET MIX CALCULATION:

A mix of the aircraft that would operate on the runway during the period of Runway 5L-23R reconstruction has been determined in the following manner:

Source: *2004 Airport Master Plan Update, Chapter 2 –Wilbur Smith Associates*

1. Projections of Aviation Demand

    a. Operation Projections:

Table 2.29
PEAK PERIOD OPERATIONS PROJECTIONS
MCGHEE TYSON AIRPORT

Carrier Category / Year	Annual	Peak Month	Average Day of Peak Month	Peak Hour Average Day
Air Carrier				
2004	45,479	4,079	136	14
2009	52,900	4,744	158	16
2014	57,800	5,620	187	19
2024	69,400	7,161	239	24
Air Cargo				
2004	3,922	372	12	4
2009	4,200	398	13	4
2014	4,600	436	15	4
2024	5,400	512	17	5
General Aviation				
2004	74,994	7,291	243	23
2009	78,800	7,661	255	24
2014	82,800	8,050	268	25
2024	91,400	8,887	296	28
Military				
2004	15,083	1,556	52	8
2009	15,000	1,548	52	8
2014	15,000	1,548	52	8
2024	15,000	1,548	52	8
Total Operations				
2004	139,478	13,298	443	48
2009	150,900	14,352	478	52
2014	160,200	15,654	522	56
2024	181,200	18,108	604	65

SOURCES: Wilbur Smith Associates, ATCT, *Official Airline Guide*

b. Air Carrier Equipment Projections:

Table 2.16
PROJECTION OF AIR CARRIER OPERATIONS, BY EQUIPMENT TYPE
MCGHEE TYSON AIRPORT

	2004		2009		2014		2024	
	Operations	% of Total	Operations	% of Total	Operations	% of Total	Operations	% of Total
Large Jet	**3,047**	**6.7%**	**6,242**	**11.8%**	**9,479**	**16.4%**	**13,255**	**19.1%**
>165 seat Jet	0	0.0%	0	0.0%	1,156	2.0%	1,943	2.8%
135-164 seat Jet	3,047	6.7%	4,285	8.1%	4,682	8.1%	5,621	8.1%
<135 seat Jet	0	0.0%	1,957	3.7%	3,641	6.3%	5,691	8.2%
Regional Jet	**34,405**	**75.6%**	**44,013**	**83.2%**	**46,702**	**80.8%**	**54,201**	**78.1%**
>50 seat RJ	931	2.0%	5,290	10.0%	7,052	12.2%	10,479	15.1%
50 seat RJ	29,566	65.0%	34,985	66.0%	35,316	61.1%	39,489	56.9%
<50 seat RJ	3,907	8.6%	4,338	8.2%	4,335	7.5%	4,233	6.1%
Turboprop	**8,032**	**17.7%**	**2,645**	**5.0%**	**1,618**	**2.8%**	**1,943**	**2.8%**
>40 seat Turboprop	1,821	4.0%	0	0.0%	0	0.0%	0	0.0%
<40 seat Turboprop	6,211	13.7%	2,645	5.0%	1,618	2.8%	1,943	2.8%
Total Operations	**45,479**		**52,900**		**57,800**		**69,400**	

NOTE: Data may not sum to totals due to rounding
SOURCE: Wilbur Smith Associates

c. Air Cargo Operations Projections:
   1) Reference Table 2.18
      - FedEx – 66.9%
      - UPS – 22.9%
      - All others – 10.2%
   2) Reference Table 2.22 - Projection of Operations
      - 2009 – 4,200
        - 1.9% Annual Growth
      - 2014 – 4,600
        - 1.7% Annual Growth
      - 2024 – 5,400

d. General Aviation Operations Projections:
   1) Based Aircraft (2004):
      - Single Engine – 77
      - Multi-Engine - 38
      - Jet - 21
      - Helicopter - 3
      - Subtotal - 139
      - Military - 35

2) Reference Table 2.24, Based Aircraft Growth Projections:
   - 2004 – 139
     - 1.7% Annual Growth
   - 2009 – 151
     - 1.8% Annual Growth
   - 2014 – 165
     - 1.8% Annual Growth
   - 2024 – 195

3) Based Aircraft Projections by Fleet Mix

Table 2.25
BASED AIRCRAFT FLEET MIX PROJECTION
MCGHEE TYSON AIRPORT

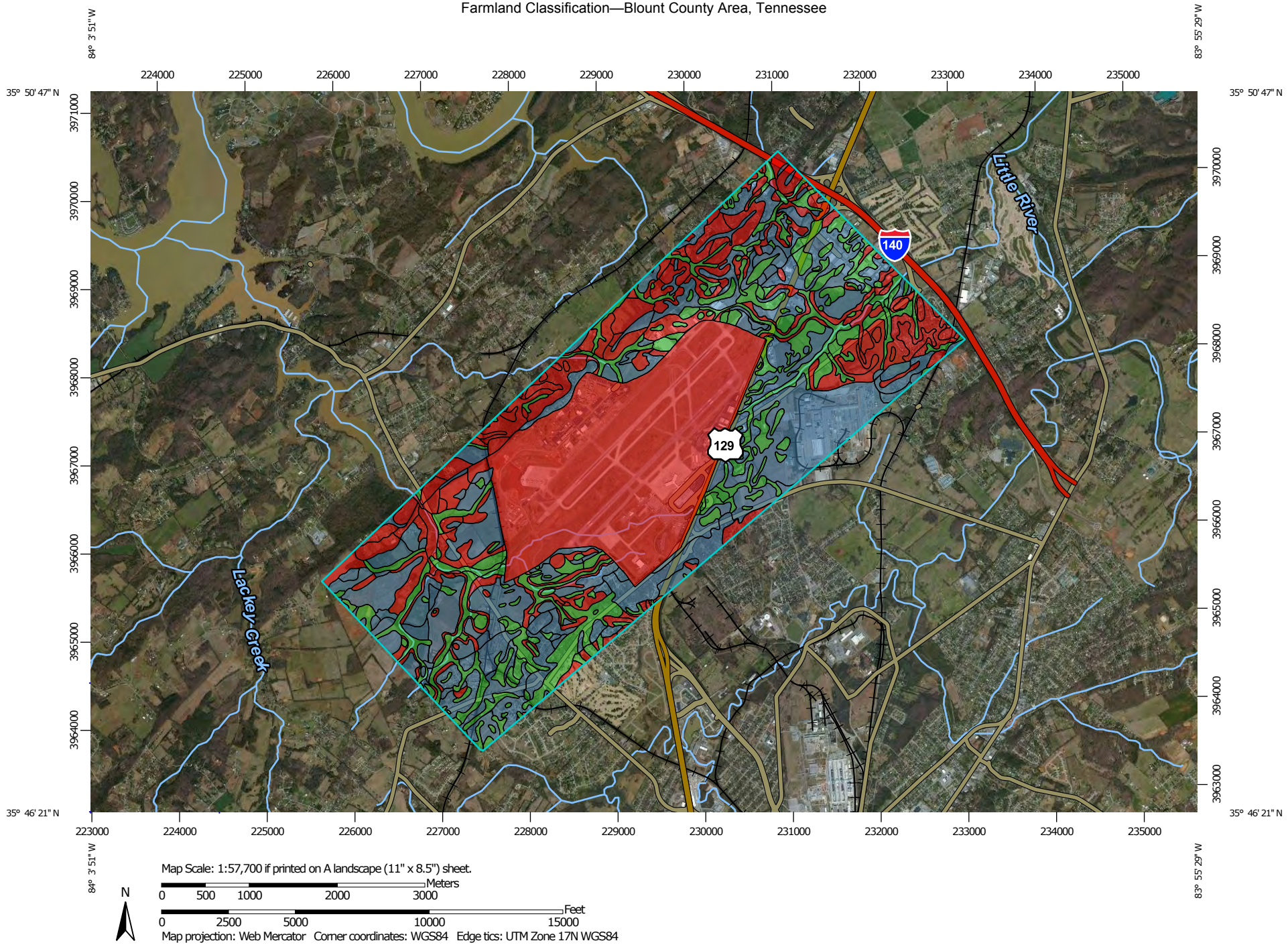
Year	Single Engine	Multi-Engine	Jet	Helicopters	Subtotal	Military	Total
2004	77	38	21	3	139	35	174
2009	79	41	28	3	151	35	186
2014	81	44	37	3	165	35	200
2024	90	52	49	4	195	35	230
Projected Average Annual Compound Growth							
2004-2024	0.8%	1.6%	4.3%	1.4%	1.7%	0.0%	1.4%

SOURCES: Airport records; Wilbur Smith Associates

Appendix B

Farmland Mapping

Farmland Classification—Blount County Area, Tennessee



MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of local importance
- Farmland of unique importance
- Not rated or not available

Soil Rating Lines

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of local importance
- Farmland of unique importance
- Not rated or not available

Soil Rating Points

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of local importance
- Farmland of unique importance
- Not rated or not available

Water Features

MAP INFORMATION

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Blount County Area, Tennessee
Survey Area Data: Version 4, Sep 18, 2012

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 12, 2011—Oct 16, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Farmland Classification

Farmland Classification— Summary by Map Unit — Blount County Area, Tennessee (TN609)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
Ab	Alcoa loam, eroded sloping phase	Farmland of local importance	30.7	0.6%
AIRPT	Airport	Not prime farmland	1,323.1	26.2%
Ba	Barbourville fine sandy loam, gently sloping phase	All areas are prime farmland	6.8	0.1%
Cd	Christian loam, eroded sloping phase	Not prime farmland	44.5	0.9%
Ce	Christian loam, moderately steep phase	Not prime farmland	76.6	1.5%
Cf	Christian loam, eroded moderately steep phase	Not prime farmland	30.5	0.6%
Da	Dandridge shaly silt loam, very steep phase	Not prime farmland	5.6	0.1%
Daa	Dunmore silty clay loam, eroded gently sloping phase	All areas are prime farmland	100.1	2.0%
Dab	Dunmore silty clay loam, eroded sloping phase	Farmland of local importance	254.2	5.0%
Dac	Dunmore silty clay loam, eroded moderately steep phase	Not prime farmland	33.7	0.7%
Db	Dandridge shaly silty clay loam, eroded moderately steep phase	Not prime farmland	0.0	0.0%
Dd	Dandridge silt loam, sloping phase	Not prime farmland	3.7	0.1%
Df	Dandridge silt loam, steep phase	Not prime farmland	2.8	0.1%
Dh	Decatur silty clay, severely eroded moderately steep phase	Not prime farmland	25.5	0.5%
Dk	Decatur silty clay loam, eroded gently sloping phase	All areas are prime farmland	86.4	1.7%
Dl	Decatur silty clay loam, eroded sloping phase	Farmland of local importance	380.4	7.5%
Dm	Decatur silty clay loam, eroded moderately steep phase	Not prime farmland	119.1	2.4%

Farmland Classification— Summary by Map Unit — Blount County Area, Tennessee (TN609)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
Dn	Dewey silt loam, sloping phase	Farmland of local importance	37.2	0.7%
Do	Dewey silt loam, moderately steep phase	Not prime farmland	17.7	0.4%
Dp	Dewey silty clay, severely eroded sloping phase	Not prime farmland	32.3	0.6%
Dr	Dewey silty clay, severely eroded moderately steep phase	Not prime farmland	53.5	1.1%
Ds	Dewey silty clay loam, eroded gently sloping phase	All areas are prime farmland	151.0	3.0%
Dt	Dewey silty clay loam, eroded sloping phase	Farmland of local importance	732.0	14.5%
Du	Dewey silty clay loam, eroded moderately steep phase	Not prime farmland	147.2	2.9%
Dv	Dunmore silt loam, sloping phase	Farmland of local importance	114.5	2.3%
Dy	Dunmore silty clay, severely eroded sloping phase	Not prime farmland	29.0	0.6%
Dz	Dunmore silty clay, severely eroded moderately steep phase	Not prime farmland	2.7	0.1%
Ea	Emory silt loam, level phase	All areas are prime farmland	12.7	0.3%
Eb	Emory silt loam, gently sloping phase	All areas are prime farmland	284.9	5.6%
Ee	Etowah silt loam, eroded sloping phase	Farmland of local importance	0.5	0.0%
Fb	Farragut silty clay loam, eroded gently sloping phase	All areas are prime farmland	11.8	0.2%
Fc	Farragut silty clay loam, eroded sloping phase	Farmland of local importance	22.7	0.5%
Ga	Greendale silt loam	All areas are prime farmland	46.3	0.9%
Gb	Gullied land, limestone material	Not prime farmland	19.4	0.4%
Gc	Gullied land, shale or sandstone material	Not prime farmland	31.2	0.6%
Ha	Hamblen loam	All areas are prime farmland	11.6	0.2%
Hc	Hamblen silt loam, local alluvium phase	All areas are prime farmland	33.4	0.7%

Farmland Classification— Summary by Map Unit — Blount County Area, Tennessee (TN609)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
Hh	Hermitage silt loam, gently sloping phase (etowah)	All areas are prime farmland	20.3	0.4%
Hk	Hermitage silt loam, eroded gently sloping phase (etowah)	All areas are prime farmland	36.4	0.7%
Hl	Hermitage silt loam, eroded sloping phase (etowah)	Farmland of local importance	72.3	1.4%
Je	Jefferson fine sandy loam, gently sloping phase	All areas are prime farmland	0.3	0.0%
La	Leadvale silt loam, gently sloping phase	All areas are prime farmland	4.6	0.1%
Lb	Leadvale silt loam, eroded gently sloping phase	All areas are prime farmland	23.4	0.5%
Le	Lindside silt loam	All areas are prime farmland	57.7	1.1%
Lg	Litz shaly silty clay loam, eroded moderately steep phase (armuchee)	Not prime farmland	7.4	0.1%
Lh	Litz silt loam, gently sloping phase	Not prime farmland	0.0	0.0%
Lk	Litz silt loam, sloping phase	Not prime farmland	5.8	0.1%
Ll	Litz silt loam, moderately steep phase	Not prime farmland	2.6	0.1%
Ma	Melvin silt loam	Not prime farmland	34.3	0.7%
Mb	Minvale silt loam, eroded gently sloping phase	All areas are prime farmland	12.8	0.3%
Mc	Minvale silt loam, eroded sloping phase	Farmland of local importance	10.7	0.2%
Na	Neubert loam	All areas are prime farmland	43.0	0.9%
Pa	Pace silt loam, gently sloping phase (tasso)	All areas are prime farmland	8.4	0.2%
Pb	Pace silt loam, eroded sloping phase (tasso)	Farmland of local importance	2.0	0.0%
Se	Sequoia silty clay, severely eroded sloping phase	Not prime farmland	14.8	0.3%
Sf	Sequoia silty clay loam, eroded gently sloping phase	Not prime farmland	63.4	1.3%
Sg	Sequoia silty clay loam, eroded sloping phase	Not prime farmland	134.7	2.7%

Farmland Classification— Summary by Map Unit — Blount County Area, Tennessee (TN609)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
Tc	Talbott silty clay, severely eroded moderately steep phase	Not prime farmland	3.2	0.1%
Td	Talbott silty clay loam, eroded sloping phase	Not prime farmland	5.6	0.1%
Tf	Talbott-Colbert very rocky silty clay loams, eroded sloping phases	Not prime farmland	1.8	0.0%
Tl	Tellico clay loam, severely eroded moderately steep phase	Not prime farmland	52.5	1.0%
Tm	Tellico clay loam, severely eroded steep phase	Not prime farmland	55.2	1.1%
Tn	Tellico loam, eroded sloping phase	Farmland of local importance	19.3	0.4%
To	Tellico loam, eroded moderately steep phase	Not prime farmland	2.4	0.0%
Tp	Tellico loam, steep phase	Not prime farmland	7.7	0.2%
Tr	Tellico loam, eroded steep phase	Not prime farmland	22.1	0.4%
W	Water	Not prime farmland	3.4	0.1%
Totals for Area of Interest			**5,043.4**	**100.0%**

Description

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Rating Options

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

Appendix C

Noise Analysis

NOISE IMPACT ANALYSIS FOR ENVIRONMENTAL ASSESSMENT FOR PROPOSED IMPROVEMENTS AT MCGHEE TYSON AIRPORT

PROJECT OVERVIEW

The Metropolitan Knoxville Airport Authority (MKAA) is undertaking an Environmental Assessment (EA) for proposed improvements at McGhee Tyson Airport (TYS). These improvements would include temporary changes that could alter noise characteristics at the airport. The Proposed Action involves the reconstruction of Runway 5L-23R; correction of a line of sight issue with the 23R end and Taxiway B; the widening of the runway shoulders; remarking the runway safety area overruns; reconfiguration of taxiways; and, the installation of a new approach lighting system. In order to implement these improvements, Runway 5L-23R would be closed and all airport operations would be shifted to Runway 5R-23L. However, a new ILS approach would need to be installed on Runway 5R-23L and crack sealing and patching would need to be conducted for the pavement surface of the runway prior to all air traffic being shifted to this runway. At this time, it is not known of Runway 5R-23L would need to be closed for crack sealing and ILS installation, or the duration of the closure. Therefore, for purposes of this noise analysis, the 2014 Future Case modeled the worst-case scenario that Runway 5R-23L would be closed and all operations would be shifted to Runway 5L-23R. Once the crack sealing and ILS installation is completed in 2014, Runway 5R-23L would reopen and Runway 5L-23R would be closed and reconstructed in 2015.

FAA Order 5050.4B, *NEPA Implementing Instructions for Airport Projects*, requires evaluation of potential noise impacts for existing and future airport conditions. The standard methodology for evaluating the noise exposures associated with airport activity is the FAA's Integrated Noise Model (INM). INM version (v) 7.0d was used in this analysis to develop noise contours for TYS for the following airport conditions:

- **2013 Base Case** – existing runway configuration with both runways operational;
- **2014 Future Case** – Runway 5R-23L closed for maintenance/upgrades, Runway 5L-23R open;
- **2015 Future Case** – Runway 5L-23R closed for maintenance/upgrades, Runway 5R-23L open; and,
- **2016 Ultimate Case** – both runways fully operational.

For the 2014 and 2015 cases, a No Build Alternative was included for comparison purposes and reflects airport noise conditions without implementation of the Proposed Action.

INTEGRATED NOISE MODEL

The INM v 7.0d works by first defining a network of reference points from which to measure noise at ground level around the airport. Flight tracks and aircraft performance profiles are created within the program based on operational conditions at the airport. INM then selects the shortest distance from each flight track to each reference point and computes the noise exposure generated by each aircraft operation. Adjustments are applied for airport climate and environmental characteristics, atmospheric acoustical attenuation, aircraft thrust variations, and time of operation. Night-time operations, those occurring between the hours of 10:00 p.m. and

7:00 a.m., are attributed a 10-decibel penalty (twice as loud). The noise exposure levels for each aircraft are then summed at each reference point to provide a day-night average sound level (DNL). DNL is a 24-hour logarithmic average sound level expressed in A-weighted decibels (dBA), as approved by the FAA. The cumulative noise exposure levels at all reference points are then used to plot noise exposure contours for selected DNL values, and superimposed onto a base map. Noise contours generated by the INM represent outdoor noise levels and depict generally expected average, daily noise exposure at a relative location, rather than noise levels for a single aircraft event. Noise exposure on any one day may be greater or less than the average day.

INM ASSUMPTIONS AND INPUTS

Effectively modeling airport noise requires many simplifying assumptions to be made regarding the data for INM input variables. The following is a summary of the operational data utilized in the noise model for this report.

Airport Operations Forecasts

In order to perform the noise analysis, it was necessary to determine baseline activity characteristics for TYS and also to develop forecasts of aviation demand. As shown in **Table 1**, the baseline 2012 activity characteristics were obtained from the FAA's Air Traffic Activity System (ATADS) database which documents the airport's historical itinerant and local operations as reported by the Airport Traffic Control Tower (ATCT). Itinerant operations are arrivals or departures that do not remain within the airport traffic pattern and/or are originating from another airport (i.e., visiting aircraft). Local operations are those that remain within the airport traffic pattern and are mostly associated with training activity and flight instruction (e.g., touch-and-goes). In 2012, TYS recorded a total of 105,989 operations, consisting of 89,408 itinerant operations and 16,581 local operations. The operations forecast in **Table 1** utilized growth rate factors from the FAA's 2012 Terminal Area Forecast (TAF) for TYS to determine the anticipated growth in operations for the 10-year period between 2012 and 2022. The FAA's 2012 TAF suggests that air carrier operations, which are operations by commercial aircraft with seating capacity of more than 60 seats, are anticipated to experience the highest average annual growth rate during that 10-year period. Because this forecast employed TAF growth rates, it should be considered consistent with the TAF thresholds as defined in FAA Order 5050.4B.

Table 1
TYS Operations Forecast (2012-2022)

Year	Itinerant (IT) Operations					Local (LOC) Operations			Total Operations
	Air Carrier	Air Taxi	GA	Military	Total	Civil	Military	Total	
2012	8,167	36,067	29,808	15,366	89,408	6,321	10,260	16,581	105,989
2017	12,152	32,621	29,835	15,366	89,974	6,284	10,260	16,544	106,518
2022	18,082	29,503	29,862	15,366	92,813	6,247	10,260	16,507	109,320
AAGR	8.27%	-1.99%	0.02%	0.00%	1.02%	-0.12%	0.00%	-0.04%	0.86%

Source: Michael Baker Jr., Inc., October 2013.
AAGR – Average Annual Growth Rate

A forecast of operations by aircraft type was also conducted for this analysis. The baseline 2012 values were determined by reviewing the FAA's Traffic Flow Management System Counts (TFMSC) database and previous studies for TYS. The TFMSC database captures flight plan operations that are filed with the FAA when an aircraft/pilot intends to fly under Instrument Flight

Rules (IFR) and/or in controlled airspace; consequently, the TFMSC database captures the majority of jet and turboprop operations. As shown in **Table 2**, TYS experienced 49,557 jet operations and 6,648 turboprop operations by civilian aircraft in 2012. The number of 2012 civilian helicopter operations was estimated from the 2006 Airport Master Plan for TYS and civilian piston operations were calculated as the remainder of itinerant and local operations. The forecasts of operations by aircraft type were conducted as follows:

- **Civilian Jet Forecast –** The *FAA Aerospace Forecast Fiscal Years 2013-2033* includes a forecast of *Total Jet Fuel and Aviation Gasoline Fuel Consumption for U.S. Civilian Aircraft* (Table 23). That forecasts shows total jet fuel consumption increasing at an average annual growth rate of 1.91 percent between 2012 and 2033, which was applied to determine the jet operations forecast.
- **Civilian Turboprop Forecast –** The same 1.91 percent growth rate was applied to determine the turboprop forecast.
- **Civilian Piston Forecast (Itinerant) –** Calculated as the remainder of itinerant operations.
- **Civilian Piston Forecast (Local) –** Calculated as the remainder of local operations.
- **Civilian Helicopter Forecast –** Helicopter operations were calculated as 1.41 percent of total operations during all forecast years.
- **Military Operations –** Consistent with the 2012 TAF, no growth was forecast for military operations.

Table 2
TYS Operations by Aircraft Type Forecast (2012-2022)

Year	Total Operations	Civilian Operations					Military Operations
		Jet IT	Turboprop IT	Piston IT	Piston LOC	Helicopter	
2012	105,989	49,557	6,648	16,339	6,321	1,498	25,626
2017	106,518	54,474	7,308	12,826	4,778	1,505	25,626
2022	109,320	59,879	8,033	9,536	4,702	1,545	25,626
AAGR	0.86%	1.91%	1.91%	-1.52%	-1.80%	0.86%	0.00%

Source: Michael Baker Jr., Inc., October 2013.
AAGR – Average Annual Growth Rate

Fleet Mix

The INM fleet mix was determined by reviewing historical activity from the FAA's TFMSC database. As shown in **Table 3**, several INM aircraft were selected to represent the airport's fleet mix and were grouped into the categories Commercial (COMM), General Aviation Helicopter (GA-HEL), General Aviation Itinerant (GA-IT), Military Fixed Wing (MIL-FW), and Military Helicopter (MIL-HEL). Because it is not possible within INM to model every single type of aircraft that operates at TYS, each INM aircraft may represent several other aircraft with similar noise profiles. For example, the Airbus A319 (A319-131) was used to model the noise exposure of the Airbus A320 (A320-211), Boeing 737-800 (737800), and Airbus A321 (A321-232).

Time of Day

Within INM, daytime operations are considered those operations that occur between the hours of 7:00 a.m. and 10:00 p.m. and nighttime hours are those between 10:00 p.m. and 7:00 a.m. Commercial time of day operations were determined using the FAA's TFMSC database

Table 3
INM Fleet Mix Characteristics

Group	INM Code	Aircraft	Type	Engine	MTOW	Noise Category	Representative Aircraft	Top Segments	Average Mileage	Day %	Night %
Commercial Aircraft Group (COMM)											
COMM	CL601	CL601/CF34-3A	J	2	43,100	3	CNA680, CNA750, CL600	ATL, CLT, MSP	195	69.80%	30.20%
COMM	EMB145	Embraer 145 ER/Allison AE3007	J	2	45,420	3	N/A	ORD, CLT, ATL	441	62.44%	37.56%
COMM	DC930	DC9-30/JT8D-9	J	2	114,000	1	GII, GIIB, DC910, 727200, 707	MEM, BHM, IND	321	74.80%	25.20%
COMM	737500	Boeing 737-500/CFM56-3C-1	J	2	133,500	3	717200, 737N17, 737300, MD81, MD82	MCO, ATL	528	84.34%	15.66%
COMM	MD83	MD-83/JT8D-219	J	2	160,000	3	737400, 737700, MD9025	ATL, SFB, FLL	422	66.85%	33.15%
COMM	A319-131	A319-131\IAE V2522-A5	J	2	166,449	3	A320-211, 737800, A321-232	DEN, MCO, ATL	823	63.67%	36.33%
COMM	757PW	Boeing 757-200/PW2037	J	2	255,000	3	757300	IND, SDF, MEM	353	52.81%	47.19%
COMM	A310-304	A310-304\GE CF6-80 C2A2	J	2	346,126	3	767CF6, A300B4-203, 767300, 767400, A330-301, 777200, MD11PW	MEM, ORF, SDF	337	54.64%	45.36%
General Aviation Helicopter Group (GA-HEL)											
GA-HEL	B206L	Bell 206L Long Ranger	T	2	4,000		N/A			95.00%	5.00%
General Aviation Itinerant Group (GA-IT)											
GA-IT	MU3001	MU300-10/JT15D-5	J	2	14,100	3	ECLIPSE500, CNA510			95.00%	5.00%
GA-IT	CNA500	CIT 2/JT15D-4	J	2	14,700	3	CNA55B			95.00%	5.00%
GA-IT	LEAR25	Lear 25/CJ610-8	J	2	15,000	2	N/A			95.00%	5.00%
GA-IT	CNA560U	Cessna Citation Ultra 560 / JT15D-5D	J	2	16,300	3	CNA525C			95.00%	5.00%
GA-IT	LEAR35	Lear 36/TFE731-2	J	2	18,300	3	CIT3, CNA560XL, IA1125, FAL20			95.00%	5.00%
GA-IT	F10062	F100/TAY 620-15	J	2	95,000	3	GIV, GV, BAE300			95.00%	5.00%
GA-IT	GASEPV	1985 1-Eng VP Prop	P	1	3,000	N/A	CNA182, PA30, DHC-2FLT, PA31			95.00%	5.00%
GA-IT	PA30	Piper Twin Comanche	P	2	3,600	N/A	GASEPF, PA28, CNA172			95.00%	5.00%
GA-IT	CNA441	Conquest II/TPE331-8	T	2	9,900	N/A	CNA208, PA42, DHC6, DO228, 1900D			95.00%	5.00%
GA-IT	DHC8	Dash 8-100/PW121	T	2	34,500	N/A	SD330, EMB120, SF340, DO328, DHC8, HS748A, CVR580			95.00%	5.00%
General Aviation Local Group (GA-LOC)											
GA-LOC	CNA172	Cessna 172R	P	2	2,450	N/A	N/A			95.00%	5.00%
GA-LOC	BEC58P	Baron 58P/TS10-520-L	P	2	6,100	N/A	N/A			95.00%	5.00%
Military Fixed Wing Group (MIL-FW)											
MIL-FW	T-38A	Northrup Talon T-38A	J	2	12,093	N/A	A10A, F15A			100.00%	0.00%
MIL-FW	F-18	McDonnell Douglas Hornet F404-GE-400	J	2	56,000	N/A	N/A			100.00%	0.00%
MIL-FW	KC-135	Boeing Stratotanker KC135R F108-CF100	J	4	323,000	N/A	C17, C5A, KC10A, KC135E			100.00%	0.00%
MIL-FW	T34	Beech Mentor (BE45) PT6A-25	P	1	4,300	N/A	T1			100.00%	0.00%
MIL-FW	C130AD	Lockheed Hercules T56-A15	T	4	175,000	N/A	N/A			100.00%	0.00%
Military Helicopter Group (MIL-HEL)											
MIL-HEL	S70	Sikorsky S-70 Blackhawk (UH-60A)	T	2	20,250	N/A	CH47D			100.00%	0.00%

Source: Michael Baker Jr., Inc., October 2013.

General aviation operations were assumed to be 95 percent during daytime hours and 5 percent during nighttime hours. Based upon the most recent FAR Part 150 Study and Airport Master Plan, military operations were modeled during daytime hours only. Daytime/nighttime percentage assumptions are listed in **Table 3**.

Airport Daily Operations

Using the fleet mix analysis, daytime/nighttime assumptions and operational forecasts, airport daily operations by representative aircraft type were determined for each noise study case year and input into INM. **Tables 4**, **5**, **6** and **7** present airport daily operations for 2013, 2014, 2015 and 2016.

Table 4
Airport Daily Operations for TYS Noise Analysis
Study Year - 2013

Representative Aircraft	Group	INM Code	Percent Use	Day Ops	Night Ops
CL601/CF34-3A	COMM	CL601	18.78%	19.02	8.23
EMBRAER 145 ER/ALLISON AE3007	COMM	EMB145	13.24%	11.99	7.21
DC9-30/JT8D-9	COMM	DC930	0.16%	0.18	0.06
BOEING 737-500/CFM56-3C-1	COMM	737500	0.89%	1.09	0.20
MD-83/JT8D-219	COMM	MD83	1.58%	1.53	0.76
A319-131\IAE V2522-A5	COMM	A319-131	0.58%	0.54	0.31
BOEING 757-200/PW2037	COMM	757PW	0.98%	0.75	0.67
A310-304\GE CF6-80 C2A2	COMM	A310-304	1.35%	1.07	0.89
BELL 206L LONG RANGER	GA-HEL	B206L	1.42%	1.95	0.10
MU300-10/JT15D-5	GA-IT	MU3001	1.52%	2.10	0.11
CIT 2/JT15D-4	GA-IT	CNA500	1.80%	2.48	0.13
LEAR 25/CJ610-8	GA-IT	LEAR25	0.11%	0.15	0.01
CESSNA CITATION ULTRA 560 / JT15D-5D	GA-IT	CNA560U	0.72%	1.00	0.05
LEAR 36/TFE731-2	GA-IT	LEAR35	4.21%	5.81	0.31
F100/TAY 620-15	GA-IT	F10062	1.72%	2.37	0.12
1985 1-ENG VP PROP	GA-IT	GASEPV	7.01%	9.67	0.51
PIPER TWIN COMANCHE	GA-IT	PA30	7.68%	10.59	0.56
CONQUEST II/TPE331-8	GA-IT	CNA441	5.98%	8.25	0.43
DASH 8-100/PW121	GA-IT	DHC8	0.41%	0.57	0.03
CESSNA 172R	GA-LOC	CNA172	3.16%	8.71	0.46
BARON 58P/TS10-520-L	GA-LOC	BEC58P	2.48%	6.84	0.36
NORTHRUP TALON T-38A	MIL-FW	T-38A	0.42%	0.61	0.00
MCDONNELL DOUGLAS HORNET F404-GE-400	MIL-FW	F-18	3.34%	4.84	0.00
BOEING STRATOTANKER KC135R F108-CF100	MIL-FW	KC-135	12.76%	18.51	0.00
BEECH MENTOR (BE45) PT6A-25	MIL-FW	T34	3.04%	4.41	0.00
LOCKHEED HERCULES T56-A15	MIL-FW	C130AD	1.60%	2.32	0.00
SIKORSKY S-70 BLACKHAWK (UH-60A)	MIL-HEL	S70	3.04%	4.41	0.00
		Totals	**100.00%**	**131.77**	**21.52**

Source: Michael Baker Jr., Inc., October 2013.

Table 5
Summary of INM Inputs for TYS Noise Analysis
Study Year - 2014

Representative Aircraft	Group	INM Code	Percent Use	Day Ops	Night Ops
CL601/CF34-3A	COMM	CL601	19.13%	19.38	8.39
EMBRAER 145 ER/ALLISON AE3007	COMM	EMB145	13.49%	12.22	7.35
DC9-30/JT8D-9	COMM	DC930	0.12%	0.13	0.04
BOEING 737-500/CFM56-3C-1	COMM	737500	0.95%	1.17	0.22
MD-83/JT8D-219	COMM	MD83	1.61%	1.56	0.77
A319-131\IAE V2522-A5	COMM	A319-131	0.60%	0.55	0.31
BOEING 757-200/PW2037	COMM	757PW	1.00%	0.77	0.69
A310-304\GE CF6-80 C2A2	COMM	A310-304	1.37%	1.09	0.90
BELL 206L LONG RANGER	GA-HEL	B206L	1.42%	1.95	0.10
MU300-10/JT15D-5	GA-IT	MU3001	1.55%	2.14	0.11
CIT 2/JT15D-4	GA-IT	CNA500	1.83%	2.52	0.13
LEAR 25/CJ610-8	GA-IT	LEAR25	0.09%	0.12	0.01
CESSNA CITATION ULTRA 560 / JT15D-5D	GA-IT	CNA560U	0.76%	1.05	0.06
LEAR 36/TFE731-2	GA-IT	LEAR35	4.29%	5.92	0.31
F100/TAY 620-15	GA-IT	F10062	1.75%	2.42	0.13
1985 1-ENG VP PROP	GA-IT	GASEPV	6.68%	9.21	0.48
PIPER TWIN COMANCHE	GA-IT	PA30	7.32%	10.09	0.53
CONQUEST II/TPE331-8	GA-IT	CNA441	6.09%	8.40	0.44
DASH 8-100/PW121	GA-IT	DHC8	0.42%	0.58	0.03
CESSNA 172R	GA-LOC	CNA172	2.99%	8.24	0.43
BARON 58P/TS10-520-L	GA-LOC	BEC58P	2.35%	6.47	0.34
NORTHRUP TALON T-38A	MIL-FW	T-38A	0.42%	0.61	0.00
MCDONNELL DOUGLAS HORNET F404-GE-400	MIL-FW	F-18	3.33%	4.84	0.00
BOEING STRATOTANKER KC135R F108-CF100	MIL-FW	KC-135	12.75%	18.51	0.00
BEECH MENTOR (BE45) PT6A-25	MIL-FW	T34	3.04%	4.41	0.00
LOCKHEED HERCULES T56-A15	MIL-FW	C130AD	1.60%	2.32	0.00
SIKORSKY S-70 BLACKHAWK (UH-60A)	MIL-HEL	S70	3.04%	4.41	0.00
		Totals	**100.00%**	**131.10**	**21.79**

Source: Michael Baker Jr., Inc., October 2013.

Table 6
Summary of INM Inputs for TYS Noise Analysis
Study Year - 2015

Representative Aircraft	Group	INM Code	Percent Use	Day Ops	Night Ops
CL601/CF34-3A	COMM	CL601	19.47%	19.75	8.55
EMBRAER 145 ER/ALLISON AE3007	COMM	EMB145	13.73%	12.45	7.49
DC9-30/JT8D-9	COMM	DC930	0.09%	0.10	0.03
BOEING 737-500/CFM56-3C-1	COMM	737500	1.02%	1.25	0.23
MD-83/JT8D-219	COMM	MD83	1.64%	1.59	0.79
A319-131\IAE V2522-A5	COMM	A319-131	0.61%	0.56	0.32
BOEING 757-200/PW2037	COMM	757PW	1.02%	0.78	0.70
A310-304\GE CF6-80 C2A2	COMM	A310-304	1.40%	1.11	0.92
BELL 206L LONG RANGER	GA-HEL	B206L	1.42%	1.96	0.10
MU300-10/JT15D-5	GA-IT	MU3001	1.58%	2.18	0.11
CIT 2/JT15D-4	GA-IT	CNA500	1.86%	2.57	0.14
LEAR 25/CJ610-8	GA-IT	LEAR25	0.07%	0.10	0.01
CESSNA CITATION ULTRA 560 / JT15D-5D	GA-IT	CNA560U	0.81%	1.11	0.06
LEAR 36/TFE731-2	GA-IT	LEAR35	4.37%	6.03	0.32
F100/TAY 620-15	GA-IT	F10062	1.78%	2.46	0.13
1985 1-ENG VP PROP	GA-IT	GASEPV	6.36%	8.78	0.46
PIPER TWIN COMANCHE	GA-IT	PA30	6.96%	9.61	0.51
CONQUEST II/TPE331-8	GA-IT	CNA441	6.20%	8.56	0.45
DASH 8-100/PW121	GA-IT	DHC8	0.43%	0.59	0.03
CESSNA 172R	GA-LOC	CNA172	2.82%	8.20	0.00
BARON 58P/TS10-520-L	GA-LOC	BEC58P	2.22%	6.44	0.00
NORTHRUP TALON T-38A	MIL-FW	T-38A	0.42%	0.61	0.00
MCDONNELL DOUGLAS HORNET F404-GE-400	MIL-FW	F-18	3.33%	4.84	0.00
BOEING STRATOTANKER KC135R F108-CF100	MIL-FW	KC-135	12.74%	18.51	0.00
BEECH MENTOR (BE45) PT6A-25	MIL-FW	T34	3.04%	4.41	0.00
LOCKHEED HERCULES T56-A15	MIL-FW	C130AD	1.59%	2.32	0.00
SIKORSKY S-70 BLACKHAWK (UH-60A)	MIL-HEL	S70	3.04%	4.41	0.00
		Totals	**100.00%**	**131.30**	**21.34**

Source: Michael Baker Jr., Inc., 2013.

Table 7
Summary of INM Inputs for TYS Noise Analysis
Study Year - 2016

Representative Aircraft	Group	INM Code	Percent Use	Day Ops	Night Ops
CL601/CF34-3A	COMM	CL601	19.80%	20.13	8.71
EMBRAER 145 ER/ALLISON AE3007	COMM	EMB145	13.96%	12.69	7.64
DC9-30/JT8D-9	COMM	DC930	0.06%	0.07	0.02
BOEING 737-500/CFM56-3C-1	COMM	737500	1.09%	1.33	0.25
MD-83/JT8D-219	COMM	MD83	1.66%	1.62	0.80
A319-131\IAE V2522-A5	COMM	A319-131	0.62%	0.57	0.33
BOEING 757-200/PW2037	COMM	757PW	1.04%	0.80	0.71
A310-304\GE CF6-80 C2A2	COMM	A310-304	1.42%	1.13	0.94
BELL 206L LONG RANGER	GA-HEL	B206L	1.41%	1.96	0.10
MU300-10/JT15D-5	GA-IT	MU3001	1.61%	2.22	0.12
CIT 2/JT15D-4	GA-IT	CNA500	1.89%	2.62	0.14
LEAR 25/CJ610-8	GA-IT	LEAR25	0.06%	0.08	0.00
CESSNA CITATION ULTRA 560 / JT15D-5D	GA-IT	CNA560U	0.85%	1.18	0.06
LEAR 36/TFE731-2	GA-IT	LEAR35	4.44%	6.14	0.32
F100/TAY 620-15	GA-IT	F10062	1.81%	2.51	0.13
1985 1-ENG VP PROP	GA-IT	GASEPV	6.04%	8.36	0.44
PIPER TWIN COMANCHE	GA-IT	PA30	6.62%	9.16	0.48
CONQUEST II/TPE331-8	GA-IT	CNA441	6.31%	8.73	0.46
DASH 8-100/PW121	GA-IT	DHC8	0.44%	0.60	0.03
CESSNA 172R	GA-LOC	CNA172	2.66%	7.75	0.00
BARON 58P/TS10-520-L	GA-LOC	BEC58P	2.09%	6.09	0.00
NORTHRUP TALON T-38A	MIL-FW	T-38A	0.42%	0.61	0.00
MCDONNELL DOUGLAS HORNET F404-GE-400	MIL-FW	F-18	3.32%	4.84	0.00
BOEING STRATOTANKER KC135R F108-CF100	MIL-FW	KC-135	12.71%	18.51	0.00
BEECH MENTOR (BE45) PT6A-25	MIL-FW	T34	3.03%	4.41	0.00
LOCKHEED HERCULES T56-A15	MIL-FW	C130AD	1.59%	2.32	0.00
SIKORSKY S-70 BLACKHAWK (UH-60A)	MIL-HEL	S70	3.03%	4.41	0.00
		Totals	**100.00%**	**130.86**	**21.69**

Source: Michael Baker Jr., Inc., 2013.

Runway Utilization

Runway utilization is the average percentage each runway is used for airport operations. Typically runway utilization is based upon prevalent meteorological conditions. For this analysis, runway utilization was taken from the most recent FAR Part 150 Study and Airport Master Plan prepared for TYS. **Table 8** provides a summary of airport runway utilization broken down by major fleet mix categories. TYS operates a parallel runway system which, according to ATCT staff, favors a higher percentage of military operations on Runway 5L-23R and a higher percentage of commercial and general aviation operations on 5R-23L.

Table 8
Runway Utilization Percentages

	Runway 5L		Runway 23R		Runway 5R		Runway 23L	
	Day	Night	Day	Night	Day	Night	Day	Night
Commercial	5.80%	5.00%	23.35%	20.00%	14.20%	15.00%	56.65%	60.00%
General Aviation	5.80%	5.00%	23.35%	20.00%	14.20%	15.00%	56.65%	60.00%
Military	17.00%	17.00%	70.00%	70.00%	3.00%	3.00%	10.00%	10.00%

Source: Airport Master Plan, Wilbur Smith Associates, 2006.

Flight Tracks

A flight track is a projection of an aircraft's in-flight path, as if shown on the ground. Due to meteorological conditions, aircraft type, stage length, air traffic separation, and pilot judgment, flight tracks can be unique to each operation. For the purposes of this noise analysis, flight tracks were taken from the most recent FAR Part 150 Study and Airport Master Plan including arrival, departures and touch-and-go tracks. **Figures 1** to **4** depict the selected flight tracks selected for noise modeling.

LAND USE COMPATIBILITY GUIDELINES

Federal Aviation Regulation, Part 150, *Airport Noise Compatibility Planning*, is the primary Federal regulation guiding and controlling planning for aviation noise compatibility on and around airports. Within this regulation, the FAA provides guidelines for evaluating various land uses inside aircraft noise exposure areas. These guidelines are reproduced here as **Table 8**. Land use compatibility of various activities is keyed to DNL values calculated in INM. The guidelines reflect the statistical variability of the responses of large groups of people to noise. Therefore, any particular noise level might not accurately assess one individual's perception of an actual noise environment.

As **Table 8** describes, all land uses are considered compatible with noise levels of less than 65 DNL. Residential, mobile home, and transient lodging uses are discouraged from 65 DNL and higher. Other noise sensitive uses such as hospitals, nursing homes, and churches are also discouraged in 65 DNL or greater. In certain cases, these uses may be permitted if the habital structure is designed with, or contains, adequate measures to achieve reduction of outdoor noise levels (soundproofing). Land uses that are less sensitive to noise levels, such as commercial use, are considered compatible with noise levels of 70 DNL without soundproofing and up to 80 DNL with soundproofing.

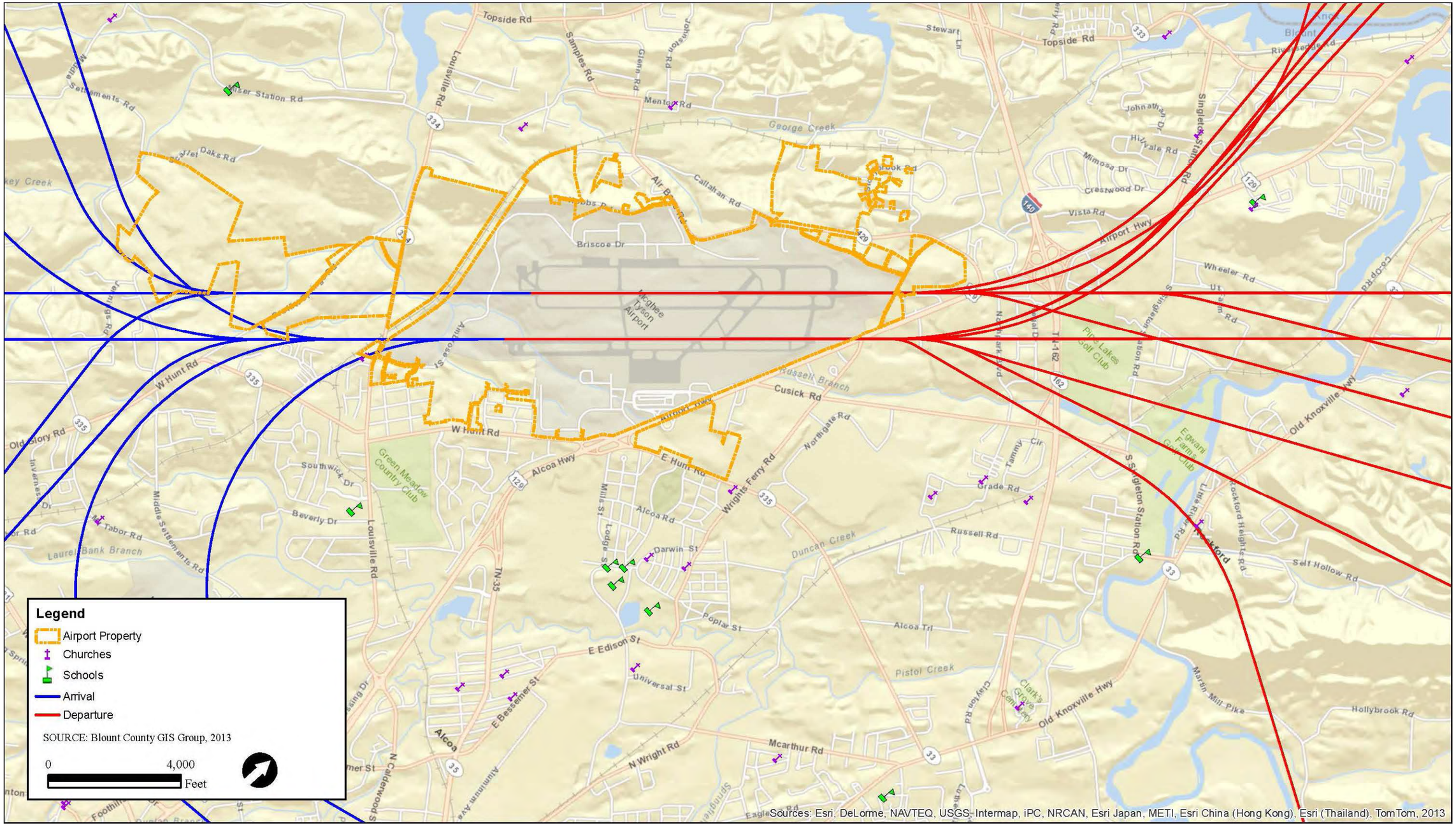


Figure 1: Runway 5L/5R Approach and Departure Tracks

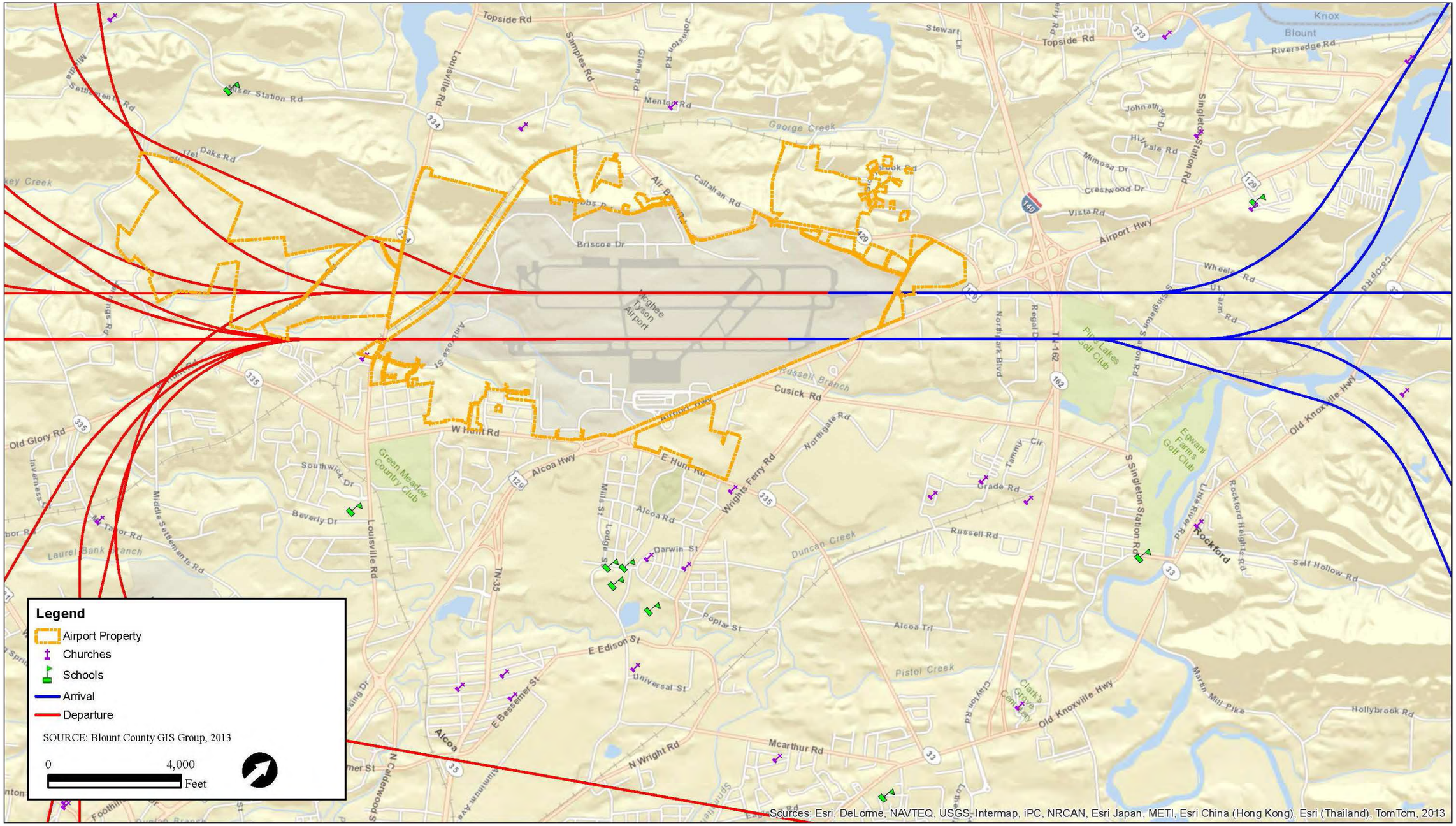


Figure 2: Runway 23L/23R Approach and Departure Tracks

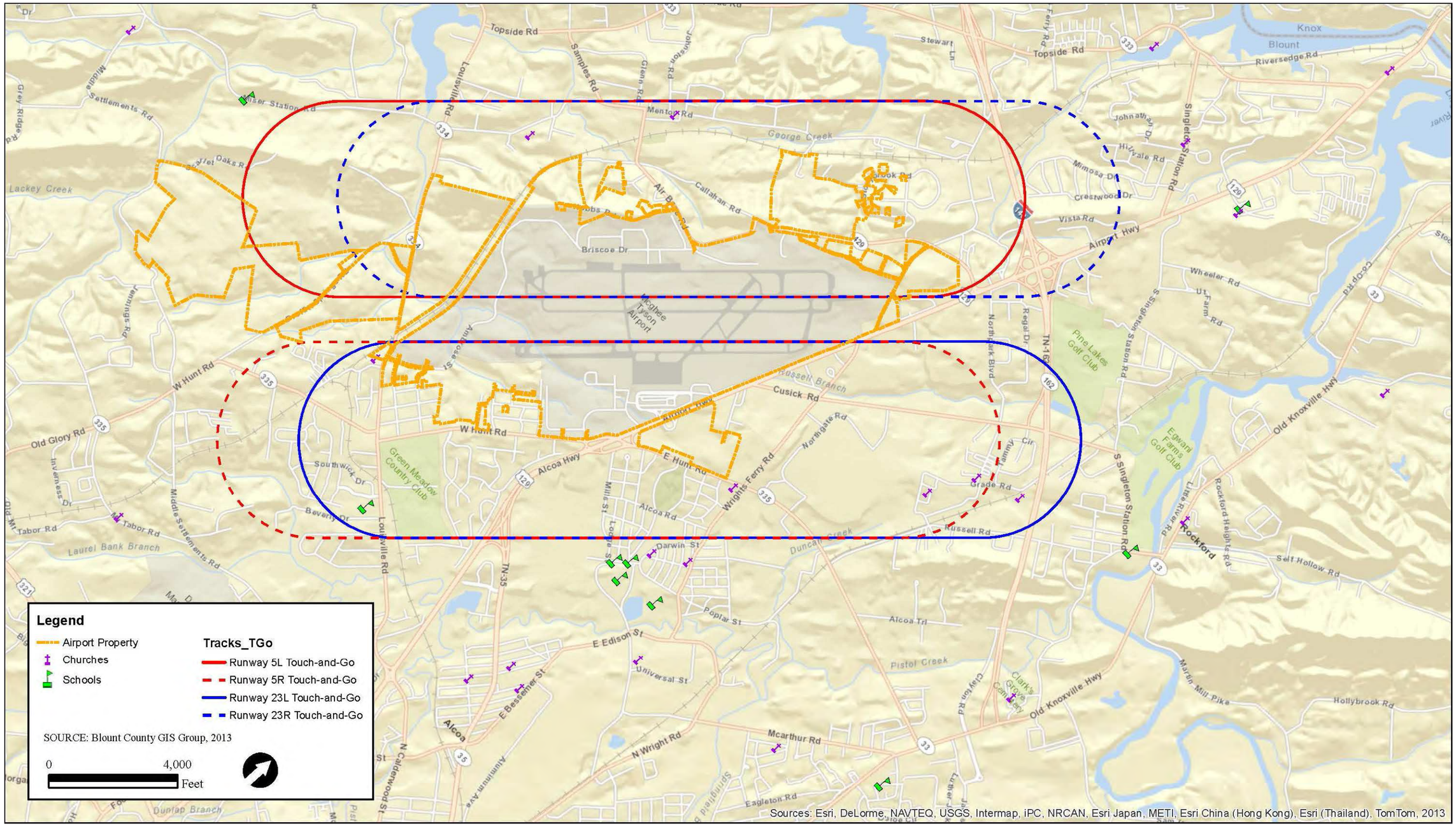


Figure 3: Runway 5L/23R and 5R/23L Touch-and-Go Flight Tracks

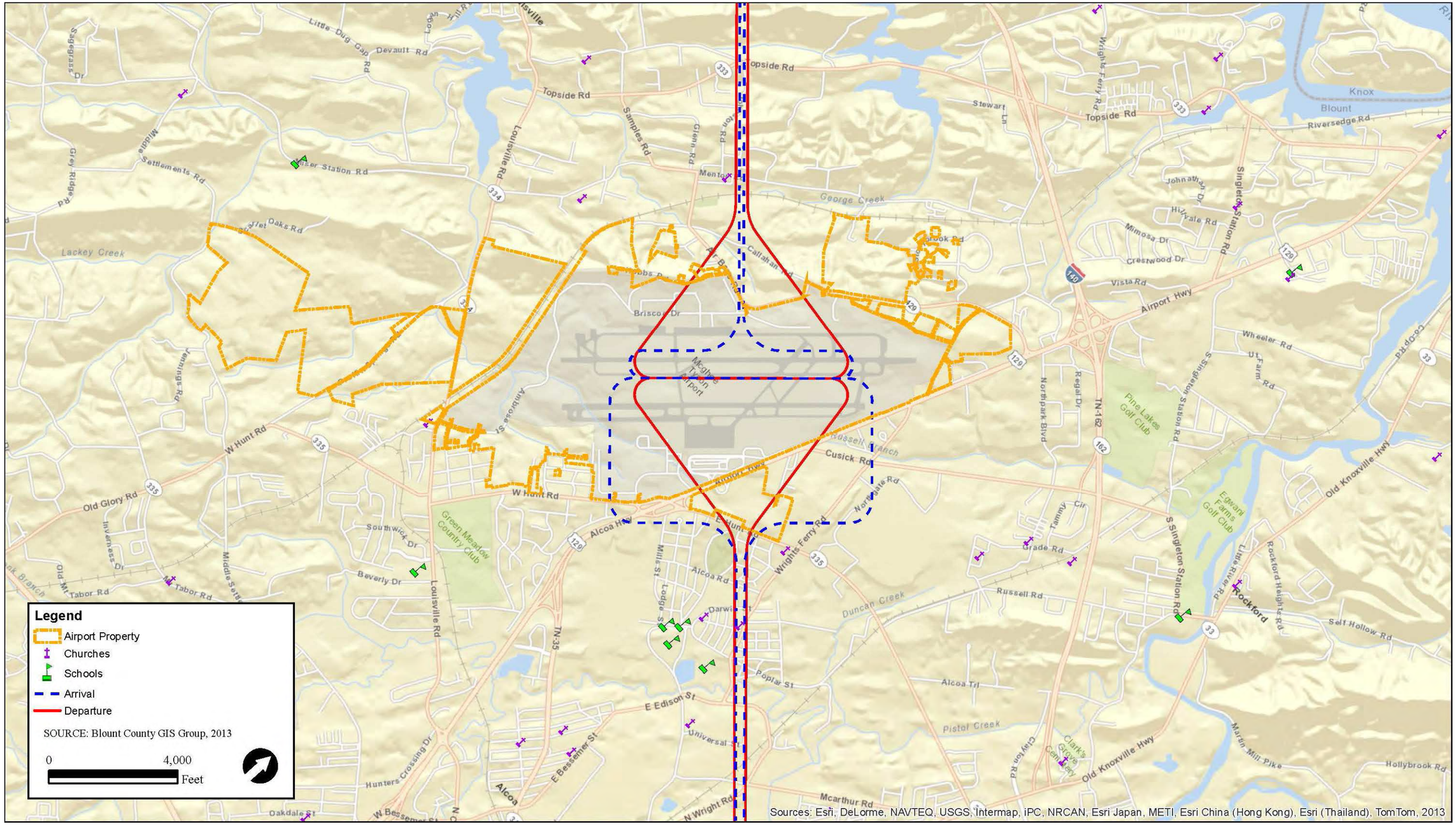


Figure 4: Helicopter Approach and Departure Flight Tracks

Table 8
Land Uses Normally Compatible With Various Noise Levels

LAND USE	Yearly day-night average sound level, DNL in decibels					
	Below 65	65-70	70-75	75-80	80-85	Over 85
Residential Use						
Residential, other than mobile and transient lodgings	Y	N(1)	N(1)	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient lodgings	Y	N(1)	N(1)	N(1)	N	N
Public Use						
Schools	Y	N(1)	N(1)	N	N	N
Hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoriums and concert halls	Y	25	30	N	N	N
Government services	Y	Y	25	30 N(3)	N	N
Transportation	Y	Y	Y(2)	Y(3)	Y(4)	Y(4)
Parking	Y	Y	Y(2)		Y(4)	N
Commercial Use						
Offices, business and professional	Y	Y	25	30	N	N
Wholesale & retail - building materials, hardware, & farm equipment	Y	Y	Y(2)	Y(3)	Y(4)	N
Retail trade - general	Y	Y	25	30	N	N
Utilities	Y	Y	Y(2)	Y(3)	Y(4)	N
Communication	Y	Y	25	30	N	N
Manufacturing and Production						
Manufacturing (general)	Y	Y	Y(2)	Y(3)	Y(4)	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y(6)	Y(7)	Y(8)	Y(8)	Y(8)
Livestock farming and breeding	Y	Y(6)	Y(7)	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
Recreational						
Outdoor sports arenas and spectator sports	Y	Y(5)	Y(5)	N	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusements, parks, resorts and camps	Y	Y	Y	N	N	N
Golf courses, riding stables and water recreation	Y	Y	25	30	N	N

Notes:

SLUCM	Standard Land Use Coding Manual
Y (Yes)	Land Use and related structures compatible without restrictions.
N (No)	Land Use and related structures are not compatible and should be prohibited.
NLR	Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.
25, 30 or 35	Land use and related structures generally compatible; measures to achieve NLR or 25, 30 or 35 must be incorporated into design and construction of structure.

(1) Where the community determines that residential or school uses must be allowed, measures to achieve outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal construction can be expected to provide an NLR of 20 dB, thus, the reduction requirements are often stated as 5, 10 or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. However, the use of NLR criteria will not eliminate outdoor noise problems.
(2) Measures to achieve NLR to 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.
(3) Measures to achieve NLR to 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.
(4) Measures to achieve NLR to 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.
(5) Land uses compatible, provided special sound reinforcement systems are installed.
(6) Residential buildings require an NLR of 25.
(7) Residential buildings require an NLR of 30.
(8) Residential buildings not permitted.
Source: 14 CFR Part 150.

NOISE CONTOURS

With the stated assumptions and inputs, the INM was utilized to generate noise contour maps for each noise study case. The resulting 2013, 2014 Build/No Build, 2015 Build/No Build and 2016 noise contours are shown on **Figures 5, 6, 7** and **8**. These contours depict lines of contiguous noise exposure expressed in DNL. DNL, as previously mentioned, is the FAA approved method for land use compatibility determinations in airport noise studies. DNL noise contours are shown on the figure beginning at 65 DNL and increasing in 5 dB increments to 75 DNL.

Changes to Off-Airport Noise Exposure

Table 9 lists the acreages of noise exposure within each DNL. For the years 2014 and 2015, Proposed Action and No-Action cases were prepared to evaluate implementation of the Proposed Action. The 2014 Future *Build* Case reflects closure Runway 5R-23L for crack sealing and ILS installation, and a shift of all airport operations to Runway 5L-23R. The 2015 Future *Build* Case reflects closure of Runway 5L-23R for reconstruction and a shift of all operations to Runway 5R-23L. In both the 2014 and 2015 *No Build* cases, both runways are operational.

As reflected in **Table 9**, total acreage of land exposed to 65 DNL or greater would be reduced during implementation of the Proposed Action; however, off-airport exposure would increase during the 2015 Build Case. Under existing conditions, the current acreage exposed is 2,149.4 acres. During the 2014 Build Case, total exposure would be reduced by 190.3 acres, with 96.2 acres of that reduction being off-airport property. This reduction in acreage is a result of shifting from a two runway system to a one runway system, which results in a concentration noise exposure over less area. This is also the case in 2015, when the Build Case would result in a reduction of noise exposure acreage by 188.7 acres; however, in 2015 there would be an increase in off-airport noise exposure by 81.4 acres. The increase in off-airport exposure is a result of shifting the noise contour southeast away from airport property.

Table 9
Change in Noise Exposure with Implementation of Proposed Action

	ACREAGE							
		2014			2015			
LOCATION	2013	Build	No Build	Change	Build	No Build	Change	2016
On-Airport	1,618.7	1,522.0	1,616.1	**-94.1**	1,344.5	1,614.6	**-270.1**	1,610.3
Off-Airport	530.7	434.0	530.2	**-96.2**	610.2	528.8	**81.4**	525.5
Total	2,149.4	1,956.0	2,146.3	**-190.3**	1,954.7	2,143.4	**-188.7**	2,135.8

Source: Michael Baker Jr., Inc., October 2013.

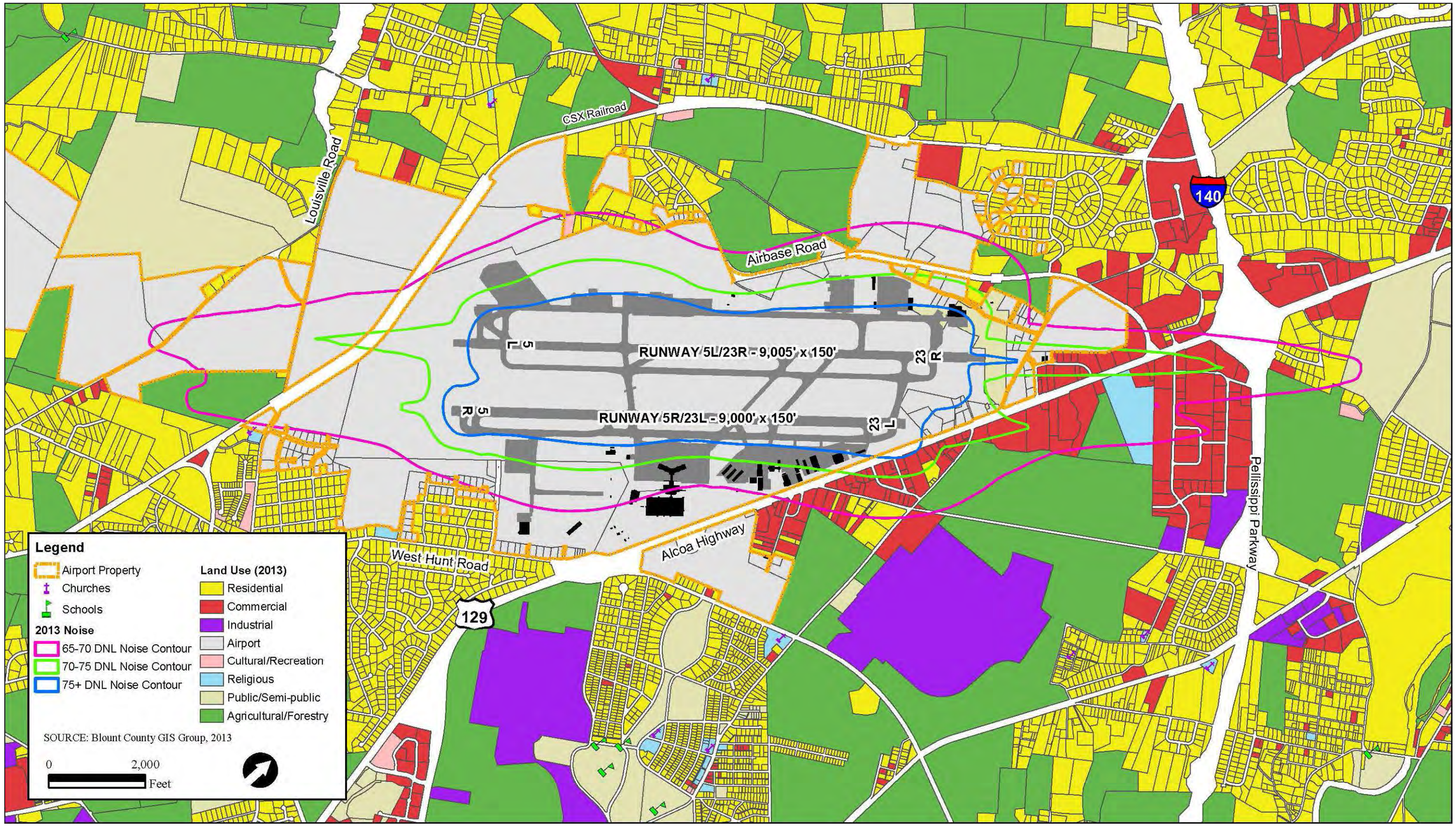


Figure 5: 2013 Airport Noise Exposure

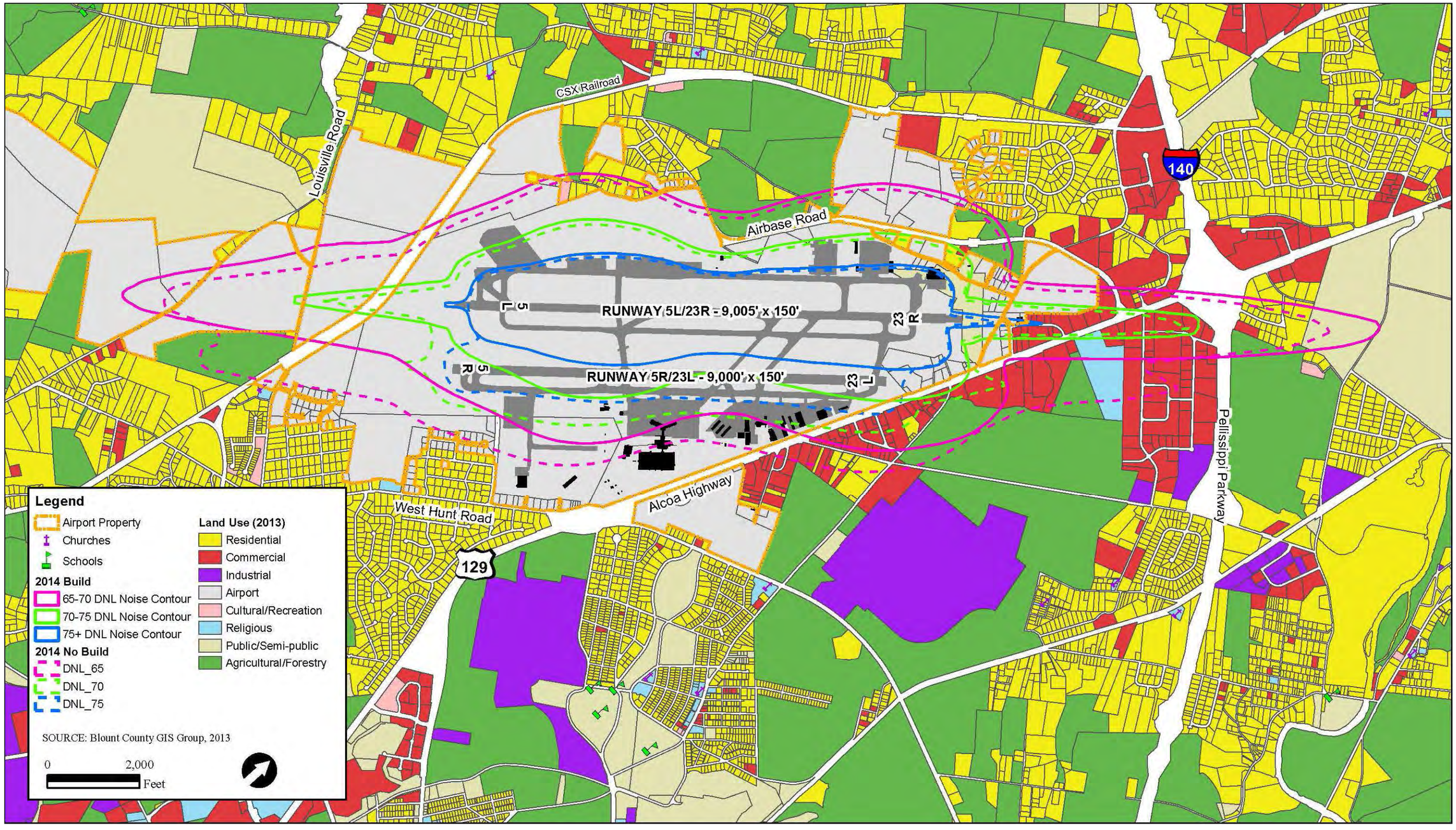


Figure 6: 2014 Airport Noise Exposure – Build vs. No Build

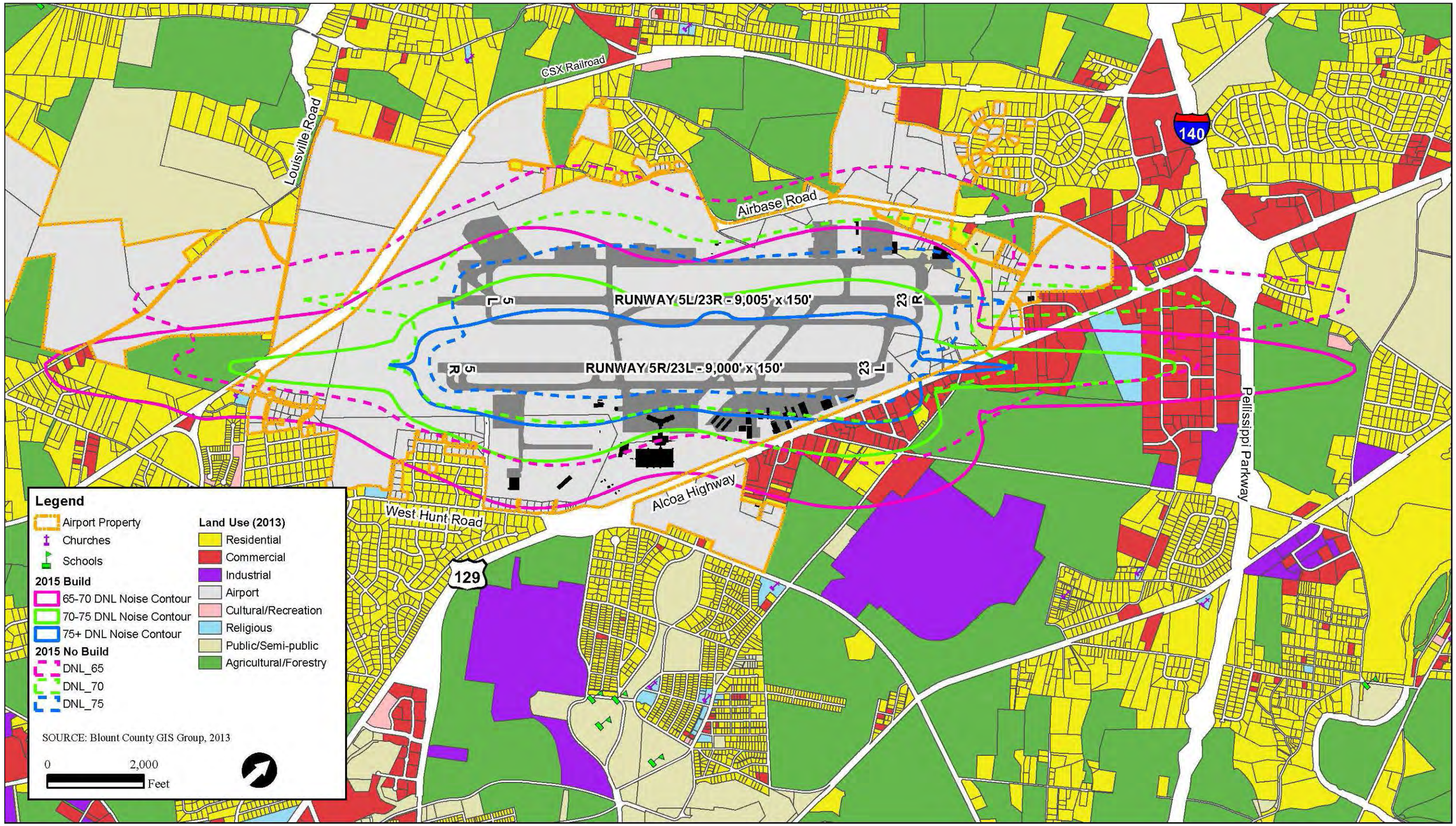


Figure 7: 2015 Airport Noise Exposure – Build vs. No Build

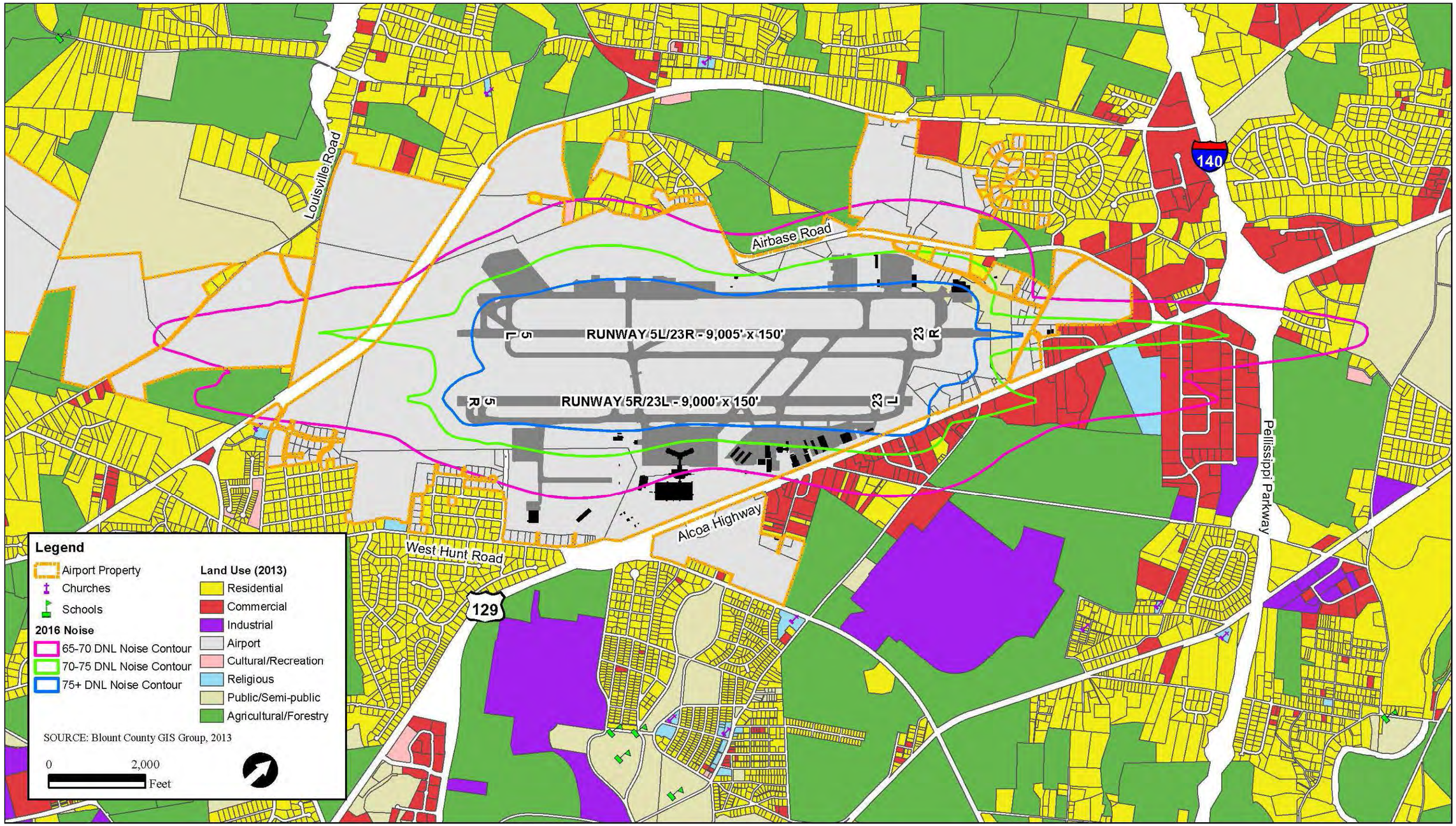


Figure 8: 2016 Airport Noise Exposure

Location Point Analysis

Noise sensitive areas located within the 65 DNL noise contour for any scenario were identified, assigned a location point in INM, and analyzed for changes as a result of the Proposed Action. For each location point, the estimated DNL was calculated and then compared to each noise case. **Figure 9** depicts the location of each point analyzed. These points all represent residential properties with the exception of Armona Baptist Church. Also noted in the analysis is the Silver Glen mobile home community.

FAA Order 1050.1E, *Environmental Policies and Procedures*, provides guidance on environmental impacts at airports and considers an increase of 1.5 dB or greater over a noise sensitive area with the 65 DNL as a significant impact. Based on this guidance, **Table 10** provides a comparison of noise levels with and without implementation of the Proposed Action.

In 2014 Future Build Case, Runway 5R-23L would be closed for maintenance and upgrades as part of the Proposed Action. All aircraft operations would be shifted to Runway 5L-23R. Based upon the results of the location points analysis, no noise sensitive areas listed in **Table 10** would experience noise level increases of 1.5 dB or greater as a result of this action.

In 2015 Future Build Case, Runway 5L-23R would be closed for maintenance and upgrades as part of the Proposed Action. All aircraft operations would be shifted to Runway 5R-23L. Based upon the results of the location points analysis, a number of noise sensitive areas would experience increased noise levels of 1.5 dB or greater. These areas include residential areas located at (refer to **Table 10** for specific addresses):

- Ambrose Road,
- Armona Road (including Silver Glen mobile home community),
- Benford Lane,
- Covey Court,
- Curie Street,
- Cusick Road,
- East Cunningham Street,
- Holloway Street,
- Link Drive,
- Louisville Road,
- Marcaro Lane,
- North Wright Road,
- Payne Road,
- Proffitt Springs Road,
- South Singleton Station
- Victoria Lane,
- West Hunt Road, and
- Wrights Ferry Road.

In addition to the residential noise impacts noted, Armona Baptist Church would also experience noise increases greater than 1.5 dB during implementation of the Proposed Action. Once the implementation steps of the Proposed Action (runway closures) were completed, noise levels over these noise sensitive areas would return to noise levels comparable to 2013 noise levels.

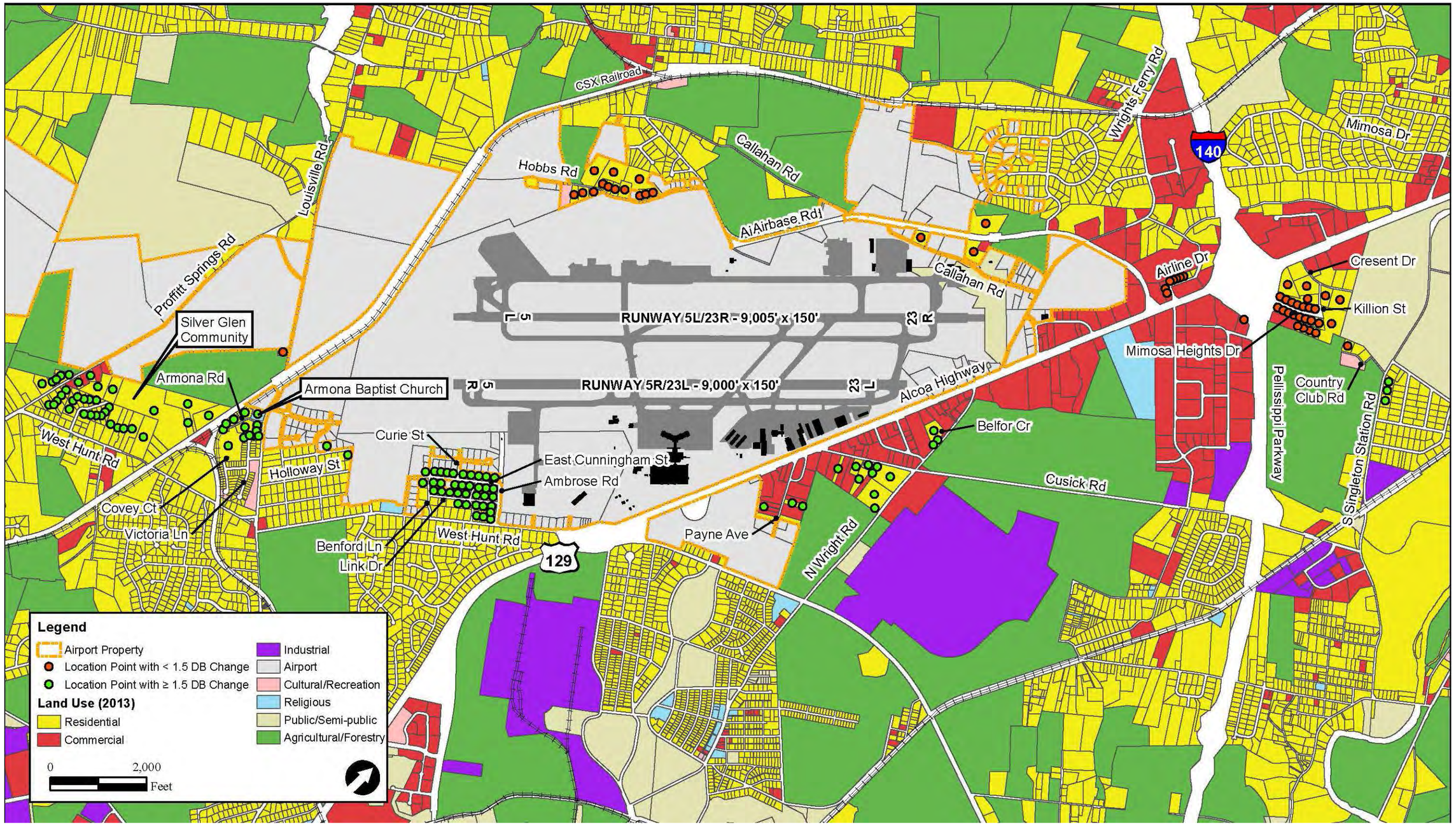


Figure 9: Location Point Analysis

Table 10
Location Point Analysis
Change in DNL at Noise Sensitive Sites

Point ID#	Address	2013	2014			2015			2016
			Build	No Build	Change	Build	No Build	Change	
1	AIRBASE RD 1920	67.0	67.6	66.9	0.7	61.2	66.9	-5.7	66.9
2	AIRBASE RD 1923 1925	70.3	71.0	70.3	0.7	63.4	70.3	-6.9	70.3
3	AIRLINE DR	66.3	67.4	66.3	1.1	57.9	66.3	-8.4	66.2
4	AIRLINE DR 1713	65.3	66.4	65.3	1.1	57.6	65.3	-7.7	65.3
5	AIRLINE DR 1721	63.9	65.0	63.9	1.1	57.0	63.9	-6.9	63.9
6	AIRLINE DR 1723	63.6	64.8	63.6	1.2	56.9	63.6	-6.7	63.6
7	AIRLINE DR 1727	63.4	64.6	63.4	1.2	56.8	63.4	-6.6	63.4
8	AIRLINE DR 1729	63.2	64.3	63.2	1.1	56.7	63.2	-6.5	63.2
9	AIRLINE DR 1731	63.0	64.1	63.0	1.1	56.6	63.0	-6.4	63.0
10	AIRPORT HWY	63.3	64.4	63.3	1.1	57.3	63.3	-6.0	63.3
11	AMBROSE RD 1921	60.8	58.8	60.8	-2.0	64.8	60.8	**4.0**	60.8
12	ARMONA RD 1006	62.9	59.1	62.9	-3.8	66.0	62.8	**3.2**	62.8
13	ARMONA RD 1010	62.1	58.4	62.1	-3.7	65.0	62.0	**3.0**	61.9
14	ARMONA RD 170	62.5	58.9	62.5	-3.6	65.5	62.4	**3.1**	62.4
15	ARMONA RD 520 624	63.6	59.7	63.6	-3.9	66.8	63.5	**3.3**	63.4
16	ARMONA RD 927	62.5	58.6	62.5	-3.9	65.6	62.4	**3.2**	62.3
17	ARMONA RD 936	63.8	59.6	63.8	-4.2	67.2	63.7	**3.5**	63.6
18	ARMONA RD 962	63.1	59.0	63.1	-4.1	66.4	63.0	**3.4**	63.0
19	ARMONA RD 980	62.7	58.6	62.7	-4.1	66.0	62.6	**3.4**	62.5
20	ARMONA RD 991	62.3	58.2	62.2	-4.0	65.5	62.2	**3.3**	62.1
21	BELFOR CIR 100	69.4	67.1	69.4	-2.3	73.6	69.4	**4.2**	69.4
22	BENFORD LN 1975	61.2	58.6	61.2	-2.6	64.8	61.2	**3.6**	61.1
23	BENFORD LN 1978	61.5	58.9	61.5	-2.6	65.3	61.5	**3.8**	61.4
24	BENFORD LN 2011	62.2	59.4	62.2	-2.8	66.0	62.1	**3.9**	62.1
25	CALLAHAN RD 2046	70.1	70.8	70.1	0.7	63.8	70.1	-6.3	70.1
26	COUNTRY CLUB RD	63.8	64.4	63.8	0.6	61.8	63.8	-2.0	63.8
27	COVEY CT 502	60.8	57.2	60.8	-3.6	63.7	60.7	**3.0**	60.7
28	CRESCENT DR 909	64.5	65.7	64.5	1.2	58.1	64.5	-6.4	64.5
29	CRESCENT DR 931	63.3	64.4	63.3	1.1	57.4	63.3	-5.9	63.3
30	CURIE ST 1979	62.3	59.7	62.3	-2.6	66.4	62.3	**4.1**	62.2
31	CURIE ST 1980	62.5	59.9	62.4	-2.5	66.6	62.4	**4.2**	62.4
32	CUSICK RD	65.6	63.6	65.6	-2.0	70.0	65.6	**4.4**	65.6

Source: Michael Baker Jr., Inc., 2013.
Note: Changes of +1.5 dB or greater are considered significant increases. Noise levels are calculated from center of property parcel.

Table 10 (Continued)
Location Point Analysis
Change in DNL at Noise Sensitive Sites

Point ID#	Address	2013	2014			2015			2016
			Build	No Build	Change	Build	No Build	Change	
33	CUSICK RD	66.3	64.1	66.2	-2.1	70.7	66.2	**4.5**	66.2
34	CUSICK RD 154	65.6	63.3	65.6	-2.3	70.3	65.6	**4.7**	65.6
35	CUSICK RD 190	66.1	63.8	66.1	-2.3	70.7	66.1	**4.6**	66.0
36	CUSICK RD 198	64.9	63.0	64.9	-1.9	69.3	64.9	**4.4**	64.9
37	CUSICK RD 206	66.4	64.2	66.4	-2.2	70.9	66.4	**4.5**	66.4
38	E CUNNINGHAM ST 411	62.8	60.3	62.8	-2.5	67.2	62.8	**4.4**	62.8
39	E CUNNINGHAM ST 414	63.8	61.1	63.8	-2.7	68.4	63.8	**4.6**	63.8
40	E CUNNINGHAM ST 427	62.6	60.1	62.6	-2.5	66.9	62.6	**4.3**	62.6
41	E CUNNINGHAM ST 430	63.6	60.9	63.6	-2.7	68.1	63.6	**4.5**	63.6
42	E CUNNINGHAM ST 446	63.5	60.7	63.5	-2.8	67.8	63.4	**4.4**	63.4
43	E CUNNINGHAM ST 460	63.3	60.5	63.3	-2.8	67.5	63.3	**4.2**	63.2
44	E CUNNINGHAM ST 476	63.1	60.3	63.1	-2.8	67.2	63.1	**4.1**	63.0
45	E CUNNINGHAM ST 510	62.9	60.1	62.9	-2.8	66.9	62.9	**4.0**	62.8
46	E CUNNINGHAM ST 524	62.8	59.9	62.8	-2.9	66.7	62.7	**4.0**	62.7
47	E CUNNINGHAM ST 526	62.6	59.8	62.6	-2.8	66.6	62.6	**4.0**	62.6
48	E CUNNINGHAM ST 527	62.1	59.5	62.1	-2.6	66.1	62.1	**4.0**	62.0
49	E CUNNINGHAM ST 543	62.0	59.4	61.9	-2.5	65.9	61.9	**4.0**	61.9
50	E CUNNINGHAM ST 548	62.5	59.7	62.5	-2.8	66.4	62.5	**3.9**	62.4
51	E CUNNINGHAM ST 571	61.7	59.1	61.6	-2.5	65.4	61.6	**3.8**	61.6
52	HOBBS RD	66.0	66.6	66.0	0.6	60.6	66.0	-5.4	66.0
53	HOBBS RD	63.9	64.5	63.9	0.6	58.4	63.9	-5.5	63.9
54	HOBBS RD 2446	64.0	64.6	64.0	0.6	58.5	64.0	-5.5	64.0
55	HOBBS RD 2448	64.9	65.5	64.9	0.6	59.2	64.9	-5.7	64.9
56	HOBBS RD 2502	65.3	66.0	65.3	0.7	59.3	65.3	-6.0	65.3
57	HOBBS RD 2506	65.6	66.3	65.6	0.7	59.5	65.6	-6.1	65.6
58	HOBBS RD 2518	65.4	66.0	65.4	0.6	59.3	65.4	-6.1	65.4
59	HOBBS RD 2524	65.5	66.1	65.5	0.6	59.5	65.5	-6.0	65.5
60	HOBBS RD 2530	65.3	66.0	65.3	0.7	59.5	65.3	-5.8	65.3
61	HOBBS RD 2536	65.1	65.7	65.1	0.6	59.5	65.1	-5.6	65.1
62	HOBBS RD 2540	63.9	64.5	63.9	0.6	58.7	63.9	-5.2	63.9
63	HOBBS RD 2541	65.9	66.5	65.9	0.6	60.2	65.9	-5.7	65.9
64	HOBBS RD 2555	66.1	66.7	66.1	0.6	60.8	66.1	-5.3	66.1

Source: Michael Baker Jr., Inc., 2013.
Note: Changes of +1.5 dB or greater are considered significant increases. Noise levels are calculated from center of property parcel.

Table 10 (Continued)
Location Point Analysis
Change in DNL at Noise Sensitive Sites

Point ID#	Address	2013	2014			2015			2016
			Build	No Build	Change	Build	No Build	Change	
65	HOLLOWAY ST 745	61.4	58.4	61.3	-2.9	64.1	61.3	**2.8**	61.2
66	HOLLOWAY ST 788	61.7	58.5	61.7	-3.2	64.3	61.6	**2.7**	61.5
67	KILLION ST 802	66.0	67.3	66.0	1.3	59.8	66.0	-6.2	66.0
68	KILLION ST 807	66.3	67.6	66.3	1.3	60.0	66.3	-6.3	66.4
69	KILLION ST 823	65.0	66.3	65.0	1.3	58.3	65.0	-6.7	65.0
70	KILLION ST 830	64.3	65.4	64.3	1.1	58.0	64.3	-6.3	64.3
71	LINK DR 410	62.1	59.8	62.1	-2.3	66.3	62.1	**4.2**	62.1
72	LINK DR 411	61.3	59.2	61.3	-2.1	65.4	61.3	**4.1**	61.3
73	LINK DR 428	61.9	59.6	61.9	-2.3	66.1	61.9	**4.2**	61.9
74	LINK DR 429	61.1	58.9	61.0	-2.1	65.1	61.0	**4.1**	61.0
75	LINK DR 443	60.9	58.7	60.9	-2.2	64.9	60.9	**4.0**	60.9
76	LINK DR 444	61.7	59.4	61.7	-2.3	65.8	61.7	**4.1**	61.7
77	LINK DR 503	60.7	58.5	60.6	-2.1	64.5	60.6	**3.9**	60.6
78	LINK DR 504	61.5	59.1	61.5	-2.4	65.4	61.5	**3.9**	61.5
79	LINK DR 517	60.5	58.3	60.5	-2.2	64.2	60.5	**3.7**	60.5
80	LINK DR 518	61.3	58.9	61.3	-2.4	65.2	61.3	**3.9**	61.3
81	LINK DR 536	61.2	58.8	61.1	-2.3	64.9	61.1	**3.8**	61.1
82	LINK DR 552	61.0	58.6	61.0	-2.4	64.7	61.0	**3.7**	60.9
83	LINK DR 564	60.9	58.4	60.8	-2.4	64.5	60.8	**3.7**	60.8
84	LOUISVILLE RD 2153	61.8	58.1	61.7	-3.6	64.6	61.7	**2.9**	61.6
85	LOUISVILLE RD 2165	62.2	58.4	62.1	-3.7	65.1	62.1	**3.0**	62.0
86	LOUISVILLE RD 2177	62.7	58.9	62.7	-3.8	65.8	62.6	**3.2**	62.5
87	LOUISVILLE RD 2431	65.9	65.3	65.9	-0.6	66.8	65.9	0.9	65.8
88	MARCARO LN	62.4	59.4	62.4	-3.0	65.2	62.4	**2.8**	62.3
89	MARCARO LN 815	61.7	58.6	61.7	-3.1	64.4	61.6	**2.8**	61.6
90	MARCARO LN 819	62.2	59.1	62.1	-3.0	65.0	62.1	**2.9**	62.1
91	MARCARO LN 824	61.5	58.3	61.5	-3.2	64.3	61.5	**2.8**	61.4
92	MARCARO LN 827	62.4	59.3	62.4	-3.1	65.3	62.4	**2.9**	62.3
93	MARCARO LN 828	61.5	58.3	61.5	-3.2	64.3	61.5	**2.8**	61.4
94	MARCARO LN 831	62.5	59.3	62.5	-3.2	65.4	62.4	**3.0**	62.4
95	MARCARO LN 832	61.5	58.3	61.5	-3.2	64.3	61.5	**2.8**	61.4
96	MARCARO LN 835	62.6	59.3	62.5	-3.2	65.5	62.5	**3.0**	62.5

Source: Michael Baker Jr., Inc., 2013.
Note: Changes of +1.5 dB or greater are considered significant increases. Noise levels are calculated from center of property parcel.

Table 10 (Continued)
Location Point Analysis
Change in DNL at Noise Sensitive Sites

Point ID#	Address	2013	2014			2015			2016
			Build	No Build	Change	Build	No Build	Change	
97	MARCARO LN 836	61.6	58.3	61.5	-3.2	64.4	61.5	**2.9**	61.5
98	MARCARO LN 840	61.8	58.5	61.8	-3.3	64.7	61.8	**2.9**	61.7
99	MARCARO LN 844	62.2	58.9	62.2	-3.3	65.2	62.2	**3.0**	62.1
100	MIMOSA DR	66.8	68.0	66.8	1.2	60.6	66.8	-6.2	66.8
101	MIMOSA DR	66.4	67.6	66.5	1.1	60.7	66.5	-5.8	66.5
102	MIMOSA DR	65.7	66.8	65.7	1.1	61.0	65.7	-4.7	65.7
103	MIMOSA HEIGHTS DR	69.1	70.2	69.1	1.1	60.3	69.1	-8.8	69.1
104	MIMOSA HEIGHTS DR	66.1	67.2	66.1	1.1	60.8	66.1	-5.3	66.1
105	MIMOSA HEIGHTS DR 803	66.7	67.9	66.7	1.2	59.9	66.7	-6.8	66.7
106	MIMOSA HEIGHTS DR 804	66.0	67.3	66.0	1.3	59.0	66.0	-7.0	66.0
107	MIMOSA HEIGHTS DR 809	66.8	68.1	66.8	1.3	59.8	66.8	-7.0	66.8
108	MIMOSA HEIGHTS DR 810	66.1	67.4	66.1	1.3	59.0	66.1	-7.1	66.1
109	MIMOSA HEIGHTS DR 814	66.2	67.4	66.2	1.2	58.9	66.2	-7.3	66.2
110	MIMOSA HEIGHTS DR 815	67.0	68.3	67.0	1.3	59.8	67.0	-7.2	67.0
111	MIMOSA HEIGHTS DR 819	67.1	68.4	67.1	1.3	59.7	67.1	-7.4	67.1
112	MIMOSA HEIGHTS DR 820	66.1	67.3	66.1	1.2	58.8	66.1	-7.3	66.1
113	MIMOSA HEIGHTS DR 825	67.1	68.4	67.2	1.2	59.5	67.2	-7.7	67.2
114	MIMOSA HEIGHTS DR 826	65.9	67.1	65.9	1.2	58.6	65.9	-7.3	65.9
115	MIMOSA HEIGHTS DR 827	67.1	68.4	67.1	1.3	59.3	67.1	-7.8	67.1
116	MIMOSA HEIGHTS DR 832	65.6	66.8	65.6	1.2	58.5	65.6	-7.1	65.6
117	MIMOSA HEIGHTS DR 833	66.9	68.2	66.9	1.3	59.1	66.9	-7.8	66.9
118	MIMOSA HEIGHTS DR 834	65.3	66.5	65.3	1.2	58.2	65.3	-7.1	65.3
119	N WRIGHT RD	63.8	62.2	63.7	-1.5	67.7	63.7	**4.0**	63.7
120	N WRIGHT RD	65.3	63.5	65.3	-1.8	69.4	65.3	**4.1**	65.3
121	N WRIGHT RD 2523	67.8	65.8	67.8	-2.0	71.9	67.8	**4.1**	67.8
122	N WRIGHT RD 2537	68.1	66.2	68.1	-1.9	72.0	68.1	**3.9**	68.1
123	PAYNE AVE 2151	60.9	59.3	60.9	-1.6	64.9	60.9	**4.0**	60.9
124	PAYNE AVE 2200	61.7	60.1	61.7	-1.6	65.9	61.7	**4.2**	61.7
125	PAYNE AVE 2208	61.7	60.0	61.7	-1.7	66.0	61.7	**4.3**	61.7
126	PROFFITT SPRINGS RD	61.7	58.8	61.7	-2.9	64.3	61.6	**2.7**	61.6
127	PROFFITT SPRINGS RD	62.5	60.3	62.5	-2.2	64.8	62.5	**2.3**	62.4
128	PROFFITT SPRINGS RD	63.2	60.2	63.2	-3.0	66.1	63.2	**2.9**	63.1

Source: Michael Baker Jr., Inc., 2013.
Note: Changes of +1.5 dB or greater are considered significant increases. Noise levels are calculated from center of property parcel.

Table 10 (Continued)
Location Point Analysis
Change in DNL at Noise Sensitive Sites

Point ID#	Address	2013	2014			2015			2016
			Build	No Build	Change	Build	No Build	Change	
129	PROFFITT SPRINGS RD	63.4	60.1	63.4	-3.3	66.5	63.4	**3.1**	63.3
130	PROFFITT SPRINGS RD 824	61.6	58.8	61.6	-2.8	64.2	61.5	**2.7**	61.5
131	PROFFITT SPRINGS RD 827	62.2	59.9	62.1	-2.2	64.4	62.1	**2.3**	62.1
132	PROFFITT SPRINGS RD 832	61.9	59.1	61.9	-2.8	64.5	61.8	**2.7**	61.8
133	PROFFITT SPRINGS RD 835	62.4	60.1	62.4	-2.3	64.7	62.4	**2.3**	62.3
134	PROFFITT SPRINGS RD 836	62.2	59.4	62.2	-2.8	64.8	62.1	**2.7**	62.1
135	PROFFITT SPRINGS RD 842	62.5	59.8	62.5	-2.7	65.1	62.4	**2.7**	62.4
136	PROFFITT SPRINGS RD 845	62.6	60.6	62.6	-2.0	64.9	62.6	**2.3**	62.6
137	PROFFITT SPRINGS RD 849	62.8	60.7	62.8	-2.1	65.1	62.8	**2.3**	62.7
138	PROFFITT SPRINGS RD 854 856	62.9	60.3	62.9	-2.6	65.5	62.9	**2.6**	62.8
139	PROFFITT SPRINGS RD 872	63.2	60.8	63.2	-2.4	65.8	63.2	**2.6**	63.1
140	S SINGLETON STATION RD 4138	61.3	57.9	61.3	-3.4	64.3	61.3	**3.0**	61.4
141	S SINGLETON STATION RD 4144	61.9	58.8	61.9	-3.1	64.6	61.9	**2.7**	61.9
142	S SINGLETON STATION RD 4152	62.0	59.6	62.1	-2.5	64.5	62.1	**2.4**	62.1
143	VICTORIA LN	61.8	58.1	61.7	-3.6	64.7	61.7	**3.0**	61.6
144	VICTORIA LN 2145	61.5	57.9	61.5	-3.6	64.4	61.4	**3.0**	61.4
145	VICTORIA LN 2149	61.8	58.1	61.7	-3.6	64.7	61.7	**3.0**	61.6
146	VICTORIA LN 2150	61.8	58.1	61.7	-3.6	64.6	61.7	**2.9**	61.6
147	W HUNT RD	60.8	57.6	60.8	-3.2	63.6	60.8	**2.8**	60.7
148	W HUNT RD 1210	60.5	57.2	60.4	-3.2	63.1	60.4	**2.7**	60.3
149	W HUNT RD 1230	60.9	57.6	60.9	-3.3	63.6	60.8	**2.8**	60.8
150	W HUNT RD 1234	60.8	57.6	60.8	-3.2	63.6	60.8	**2.8**	60.7
151	W HUNT RD 1240	61.0	57.8	61.0	-3.2	63.8	61.0	**2.8**	60.9
152	W HUNT RD 408	60.3	58.3	60.3	-2.0	64.3	60.3	**4.0**	60.3
153	W HUNT RD 424	60.3	58.2	60.3	-2.1	64.2	60.3	**3.9**	60.2
154	W HUNT RD 440	60.2	58.1	60.1	-2.0	64.0	60.1	**3.9**	60.1
155	WRIGHTS FERRY RD	62.7	61.3	62.7	-1.4	66.4	62.7	**3.7**	62.6
A	ARMONA BAPTIST CHURCH	63.8	59.7	63.8	-4.1	67.2	63.7	**3.5**	63.6

Source: Michael Baker Jr., Inc., 2013.
Note: Changes of +1.5 dB or greater are considered significant increases. Noise levels are calculated from center of property parcel.

CONCLUSION

Based on the results of the noise analysis, implementation of the Proposed Action would cause significant, but temporary noise impacts to noise sensitive areas within the vicinity of TYS. These impacts are the result of temporarily shifting all operations to Runway 5R-23L during construction in 2015, for a period of approximately 14 months. During this shift, off-airport noise exposure would increase by 81.4 acres causing residential areas and one church to be impacted by noise increases of 1.5 dB or greater within the 65 DNL. **Table 10** provides a list of noise sensitive areas analyzed and the associated increase/decreases. Since these increases are temporary in nature, traditional noise mitigation practices, such as land acquisition or sound insulation would not be practical.

Appendix D

Agency Coordination

Michael Baker Jr., Inc.
700 Huger Street
Columbia, SC 29201

803-254-2211
FAX 803-779-8749

RECEIVED
JUL 19 2013

July 11, 2013

Ms. Tammy Bilbrey
Ecological Services Field Office
U.S. Fish and Wildlife Service
446 Neal Street
Cookeville, TN 38501-4027

RE: McGhee Tyson Airport Environmental Assessment
Pre-development Consultation

Dear Ms. Bilbrey:

Michael Baker Jr. Inc., has been retained by the Metropolitan Knoxville Airport Authority (MKAA) to prepare an Environmental Assessment (EA) for proposed improvements at McGhee Tyson Airport, which will include reconstruction of Runway 5L-23R; pavement maintenance and installation of an instrument landing system (ILS) on Runway 5R-23L; and, modifications to the airfield taxiway system. The EA will be prepared in accordance with the *National Environmental Policy Act,* Federal Aviation Administration (FAA) Order 1050.1E, FAA Order 5050.4B, and other applicable federal and state regulations. The resulting product will be the submittal of a final EA document to the FAA to facilitate the issuance of a written finding.

As shown on the enclosed map, the Airport is accessed from U.S. Route 129, Alcoa Highway, just south of Interstate 140. The proposed project involves improvements to airfield facilities located within the existing airport property boundary, which is also depicted on the enclosed figure. We are requesting resource information from your office as it relates to the proposed action along with identification of any areas of special concern. All relevant information that your office can provide will be useful in accurately assessing the existing airport environment, developing alternatives, and evaluating potential impacts.

Thank you in advance for your assistance. If you have any questions, please contact me at (803) 231-3938 or by email at lstevens@mbakercorp.com.

Sincerely,
Michael Baker Jr. Inc.,

Laura M Stevens

Laura M. Stevens

No significant impacts to wetlands are anticipated from this proposal. No federally listed endangered or threatened species, or habitat suitable for such species, are known to exist in the project area.

for Field Supervisor 8/14/13
U.S. Fish and Wildlife Service Date
Cookeville, TN 38501

cc: Mr. Stephen Wilson, FAA
Mr. Tom Burgess, TDOT Aeronautics
Mr. Bill Marrison, MKAA
Mr. Bryan White, MKAA
Mr. Eric Williamson, MKAA
Mr. Mike Reiter, Baker
Mr. Jeff Pike, Baker

Stevens, Laura

From: Elliott, Catherine B LRN <Catherine.B.Elliott@usace.army.mil>
Sent: Friday, August 16, 2013 3:16 PM
To: Stevens, Laura
Subject: McGhee Tyson Airport Resource Infomation (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

This is in regard to your July 12 telephone conversation with Cathy Elliott of the Eastern Regulatory Field Office and your July 16, 2013 letter requesting resource information for runway maintenance and associated work at the subject project. The U.S. Army Corps of Engineers (USACE) has regulatory responsibilities pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) and Section 404 of the Clean Water Act (33 U.S.C. 1344). Under Section 10, the USACE regulates any work in, or affecting, navigable waters of the U.S. Under Section 404, the USACE regulates the discharge of dredged and/or fill material into waters of the U.S., including wetlands.

If any work is to be performed in waters of the US, you should submit a jurisdictional determination of waters of the U.S. for verification by this office. If any work is to be done in waters of the US a permit from the Corps of Engineers will be required prior to construction**.**

We appreciate your awareness of our regulatory program.

Cathy Elliott
Project Manager
Eastern Regulatory Field Office
U.S. Army Corps of Engineers
Nashville District
Phone: (865) 986-7296
http://www.lrn.usace.army.mil
http://www.facebook.com/nashvillecorps

We would appreciate your feedback on how we are performing our duties. Our automated Customer Service Survey is located at http://per2.nwp.usace.army.mil/survey.html. Thank you for taking the time to visit this site and complete the survey.

Classification: UNCLASSIFIED
Caveats: NONE

TENNESSEE HISTORICAL COMMISSION
STATE HISTORIC PRESERVATION OFFICE
2941 LEBANON ROAD
NASHVILLE, TENNESSEE 37214
OFFICE: (615) 532-1550
www.tnhistoricalcommission.org

August 15, 2013

RECEIVED
AUG 19 2013
MICHAEL BAKER JR., INC.
COLUMBIA OFFICE

Ms. Laura M. Stevens
BAKER
700 Huger Street
Columbia, South Carolina, 29001

RE: FAA, MCGHEE TYSON AIRPORT EXPANSION, KNOXVILLE, KNOX COUNTY

Dear Ms. Stevens:

In response to your request, received on Monday, August 12, 2013, we have reviewed the documents you submitted regarding your proposed undertaking. Our review of and comment on your proposed undertaking are among the requirements of Section 106 of the National Historic Preservation Act. This Act requires federal agencies or applicant for federal assistance to consult with the appropriate State Historic Preservation Office before they carry out their proposed undertakings. The Advisory Council on Historic Preservation has codified procedures for carrying out Section 106 review in 36 CFR 800. You may wish to familiarize yourself with these procedures (Federal Register, December 12, 2000, pages 77698-77739) if you are unsure about the Section 106 process. You may also find additional information concerning the Section 106 process and the Tennessee SHPO's documentation requirements at http://www.tennessee.gov/environment/hist/federal/sect106.shtml

To complete our review of this undertaking, this office will need to receive from you a hard copy of a USGS topographic 7.5 minute series 1:24000 map to scale plus the name of the quadrant map to scale indicating the location of each specific project activity and a detailed project narrative. You may obtain the appropriate USGS maps through the Department of Environment and Conservation, Division of Geology, Maps and Publications Sales Office at (615) 532-1516. Please be sure to give us the name of the quad map. In addition we will need the following hard copy information: 1) Numbered photographs of the general area. 2) Numbered photographs of the project site. 3) Dates of construction, if known, of buildings on the site or within view of the project. 4) A key map indicating the location of each photograph. The photographs may be digital, but must be at least 3" X 5" in diameter.

Upon receipt of the additional information, we will complete our review of this undertaking as expeditiously as possible. Until this office has rendered a final comment on this project, your Section 106 obligation under federal law has not been met. Please inform this office if this project is not funded or canceled by the federal agency. Your cooperation is appreciated. You may find additional information concerning the Section 106 process and the Tennessee SHPO's documentation requirements at www.state.tn.us/environment/hist/sect106.htm. Questions and comments may be directed to Joe Garrison (615) 532-1550-103.

Your cooperation is appreciated.

Sincerely,

E. Patrick McIntyre, Jr.

E. Patrick McIntyre, Jr.
Executive Director and
State Historic Preservation Officer

EPM/jyg

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Knoxville Environmental Field Office
3711 Middlebrook Pike
Knoxville, TN 37921
(865) 594-6035

Michael Baker Jr., Inc.
ATTN: Laura M. Stevens
700 Huger Street
Columbia, SC 29201

Re: McGhee Tyson Airport Environmental Assessment

Dear Ms. Stevens:

The Tennessee Public Records Act is found at Tennessee Code Annotated Section 10-7-503. Unlike the federal Freedom of Information Act, the Tennessee law does not require the state to conduct a search for records. It is your responsibility to identify the records you are seeking. However, as a courtesy, a search of the files in the Environmental Field Office was conducted, and:

☑ No records matching your description were found. We do however have files for McGhee Tyson Air National Guard.

☐ A small number of records were found and they are enclosed with this letter.

☐ A large volume of records were found and are available. You should setup an appointment by calling to inspect and indentify any of these records that you would like copied.

If you would like to view these files call Kathy Irick at 594-5470.

Again, please understand that our courtesy search was based upon your description of the records you are seeking, and it was limited to local files only. In many cases there may be additional records at other TDEC offices. You may want to more clearly describe the records that you are seeking and/or contact our other offices. You can also find a great deal of information on our website at: www.tn.gov/environment.

All of our non-confidential records are open for inspection between the hours of 8:00 a.m. and 4:00 p.m. at our Nashville Central Office and each of our Field Offices. You may request copies of documents that you identify during your inspection. There may be a charge for copies and labor costs pursuant to Tennessee Rule 0400-01-01-.01.

It may be helpful to your search if you call the appropriate Division in advance of coming to our offices so that the personnel familiar with the filing system are available to assist you. Attached is a contact list to assist you in your search.

Sincerely,

Cynthia Mabe-Johnson
Administrative Manager

TENNESSEE ENVIRONMENT AND CONSERVATION CONTACT LIST

DIVISION OF AIR POLLUTION CONTROL	615-532-0554
DIVISION OF ARCHEOLOGY	615-741-1588
DIVISION OF NATURAL AREAS	615-532-0431
DIVISION OF RADIOLOGICAL HEALTH	615-532-0364
DIVISION OF REMEDIATION	615-532-0900
DIVISION OF HAZARDOUS & SOLID WASTE MANAGEMENT	615-532-0780
DIVISION OF UNDERGROUND STORAGE TANKS	615-532-0945
DIVISION OF WATER RESOURCES	
WATER SUPPLY	615-532-0191
GROUNDWATER PROTECTION	615-532-0761
WATER POLLUTION CONTROL	615-532-0625
MEMPHIS ENVIRONMENTAL FIELD OFFICE	901-371-3000
JACKSON ENVIRONMENTAL FIELD OFFICE	731-512-1300
COLUMBIA ENVIRONMENTAL FIELD OFFICE	931-840-4142
NASHVILLE ENVIRONMENTAL FIELD OFFICE	615-687-7000
COOKEVILLE ENVIRONMENTAL FIELD OFFICE	931-432-7605
CHATTANOOGA ENVIRONMENTAL FIELD OFFICE	423-634-5745
KNOXVILLE ENVIRONMENTAL FIELD OFFICE	865-594-5450
JOHNSON CITY ENVIRONMENTAL FIELD OFFICE	423-854-5404

Stevens, Laura

From: Gissentanna, Larry <Gissentanna.Larry@epa.gov>
Sent: Tuesday, September 17, 2013 10:24 AM
To: Stevens, Laura
Cc: Mueller, Heinz
Subject: McGhee Tyson Airport Environmental Assessment (Scoping)

Michael Baker Jr., Inc
700 Huger Street
Columbia, SC 29201
803-231-3938

Dear Ms Laura Stevens,

Consistent with Section 102(2)(c) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, the U.S. Environmental Protection Agency (EPA) appreciates the opportunity to review the scoping document for the McGhee Tyson Airport Environmental Assessment (EA). Reference memorandum dated July 11,2013 Subject as stated above, EPA understands that Baker Inc is preparing an EA for proposed improvements at McGhee Tyson Airport. The improvements include reconstruction of Runway 5L-32R: pavement maintenance and installation of an instrument landing system (ILS) on Runway 5R-32L, and modification to the airfield taxiway system.

EPA initial concerns are as follows: If jurisdictional wetlands are to be impacted, Section 404 Clean Water Act permitting must be obtained and the required compliance with USACE Mitigation Guidelines and the Federal Mitigation Rule should be undertaken prior to construction. It is expected that appropriate wetland banking credits will be purchased to offset any impacts to project areas.

The environmental, socioeconomic and health related impacts to potential EJ populations should be evaluated in the proposed EA. The demographics of the area should be documented in terms of the existence of minority and low-income populations. This description should include US Census data for the geographic unit(s) such as the Census Block Group(s) (BGs) encompassing the project areas. At a minimum, the percentages of minority and low-income populations within these BGs should be documented and compared against other demographics of the area, as well as against the percentages of neighboring BGs, counties and the State of TN. In addition, other demographic factors like population age, density, literacy, etc. may also be important to the overall assessment. Meaningful collaboration with the community can also help to identify whether any "pockets" (concentrations) of EJ communities exist within a BG that otherwise (as a whole) may have a relatively low percentage of minorities and low-income populations. We suggest coordination with local community leaders and groups in an effort to engage these communities in the scoping, assessment and project design process. The EA should include maps of the surrounding communities and indicate the proximity of communities with potential EJ concerns to the proposed project area.

EPA would also be concern about Lead and Asbestos containing material located throughout any buildings proposed for demolition. The Asbestos National Emission Standard for Hazardous Air Pollutants (NESHAP) contained in 40 C.F.R. Part 61, Subpart M would be applicable to the renovation and the demolition of these buildings. Among other requirements, the buildings would have to be thoroughly inspected for asbestos and the asbestos would have to be properly removed prior to demolition. If the buildings were simply abated, that would also have to be done in accordance with the applicable notification, work practice, and disposal requirements of the NESHAP if threshold amounts of asbestos were involved.

EPA would also suggest the following to be addressed within the EA:

- Consider energy sustainable buildings utilizing variable forms of proven renewable energy applicable for these project sites.
  http://www.energystar.gov/ http://www.wbdg.org/references/federal_mandates.php
- Infrastructure Impacts: Construction/ Operation impacts to water supplies, wastewater treatment, roadways/traffic/public transportation, energy/utilities, solid waste, etc.
- Consider Visual/ Aesthetics; Construction/ operation impacts to the nearest receptors. For example, adding a water tower, or multi-level building.
- Require the contractor to use dust abatement measures, such as wetting, mulching, or seeding exposed areas, where appropriate, to address any air quality concerns.
- Require the contractor to mitigate vehicle emissions impacts as much as possible by prohibiting extended equipment idling.
- Require the contractor to provide lay down (i.e., temporary material storage) areas for construction equipment and materials within existing cleared and paved areas to minimize disturbance to existing land and vegetation.
- Require contractor compliance with erosion and sediment control measures related to stabilization of disturbed areas, to include silt fencing, or other suitable control device, to be placed around the construction area to mitigate erosion and sediment runoff.
- Require the contractor to implement BMPs for erosion/sediment control and stormwater management to minimize impacts to the existing stormwater collection system, wetlands, and other environmental resources.
- Measures to be taken by the contractor to prevent, control, and mitigate the release of oils, trash, debris, and other pollutants to air, water and land.
- Require contractors to safely handle and dispose of solid and hazardous waste in accordance with applicable local, state and federal regulations.
- Require contractors to provide appropriate health and safety training, precautions and other protection for their workers.
- Require contractors to recycle or reuse materials to the greatest extent possible, and to dispose of construction debris in accordance with federal, state and local waste disposal regulations.
- Require that the Proposed Action not commence without the concurrence of the State Historic Preservation Office (SHPO) regarding any National Register-eligible historic structure.
- In the event that unexpected cultural resources were found during construction activities, the contractor to stop work and consult with the State Historic Preservation Office (SHPO).
- Transporting construction equipment and materials over local roads be scheduled to occur after peak traffic periods, whenever possible.
- Contractors to minimize construction-related noise impacts by limiting construction-related activities to the hours between 7:00a.m. and 5:00p.m. on weekdays.
- Keep the local community/stakeholders informed and involved throughout the project process; by having community meetings and/or updating the community through local media (radio, local paper and TV).

When Draft EA becomes available, please provide a copy to this office. Thank you for the opportunity to comment, if you have any questions, you can reach me via the information below.

Thank you,

Larry O. Gissentanna
DoD and Federal Facilities, Project Manager

U.S. Environmental Protection Agency/ Region 4
National Environmental Policy Act (NEPA) Program Office
61 Forsyth Street, SW
Atlanta, GA 30303-8960
Office: 404-562-8248
gissentanna.larry@epa.gov

TENNESSEE HISTORICAL COMMISSION
STATE HISTORIC PRESERVATION OFFICE
2941 LEBANON ROAD
NASHVILLE, TENNESSEE 37214
OFFICE: (615) 532-1550
www.tnhistoricalcommission.org

December 5, 2013

RECEIVED
DEC 10 2013
MICHAEL BAKER JR., INC.
COLUMBIA OFFICE

Ms. Laura Stevens
Baker
700 Huger Street
Columbia, South Carolina, 29201

RE: FAA, MCGHEE-TYSON RUNWAY 5L-23R RECON., UNINCORPORATED, BLOUNT COUNTY

Dear Ms. Stevens:

In response to your request, received on Tuesday, December 3, 2013, we have reviewed the documents you submitted regarding your proposed undertaking. Our review of and comment on your proposed undertaking are among the requirements of Section 106 of the National Historic Preservation Act. This Act requires federal agencies or applicant for federal assistance to consult with the appropriate State Historic Preservation Office before they carry out their proposed undertakings. The Advisory Council on Historic Preservation has codified procedures for carrying out Section 106 review in 36 CFR 800. You may wish to familiarize yourself with these procedures (Federal Register, December 12, 2000, pages 77698-77739) if you are unsure about the Section 106 process.

Considering available information, we find that the project as currently proposed MAY ADVERSELY AFFECT PROPERTIES THAT ARE ELIGIBLE FOR LISTING IN THE NATIONAL REGISTER OF HISTORIC PLACES. You should now begin immediate consultation with our office. Please direct questions and comments to Joe Garrison (615) 532-1550-103.

Sincerely,

E. Patrick McIntyre, Jr.

E. Patrick McIntyre, Jr.
Executive Director and
State Historic Preservation Officer

EPM/jyg

TENNESSEE HISTORICAL COMMISSION
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
2941 LEBANON ROAD
NASHVILLE, TN 37243-0442
(615) 532-1550

December 16, 2013

Ms. Laura M. Stevens
BAKER
700 Huger Street
Columbia, South Carolina, 29001

RE: FAA, MCGHEE-TYSON RUNWAY 5L-23R RECON., UNINCORPORATED, BLOUNT COUNTY

Dear Ms. Stevens:

In response to your request, received on Wednesday, December 11, 2013, we have reviewed the documents you submitted regarding your proposed undertaking. Our review of and comment on your proposed undertaking are among the requirements of Section 106 of the National Historic Preservation Act. This Act requires federal agencies or applicant for federal assistance to consult with the appropriate State Historic Preservation Office before they carry out their proposed undertakings. The Advisory Council on Historic Preservation has codified procedures for carrying out Section 106 review in 36 CFR 800. You may wish to familiarize yourself with these procedures (Federal Register, December 12, 2000, pages 77698-77739) if you are unsure about the Section 106 process. You may find additional information concerning the Section 106 process and the Tennessee SHPO's documentation requirements at. http://www.tennessee.gov/environment/hist/federal/sect106.shtml

Considering available information, we find that the project as currently proposed will NOT ADVERSELY AFFECT ANY PROPERTY THAT IS ELIGIBLE FOR LISTING IN THE NATIONAL REGISTER OF HISTORIC PLACES. Therefore, this office has no objection to the implementation of this project. Please direct questions and comments to Joe Garrison (615) 532-1550-103.

We appreciate your cooperation.

Sincerely,

E. Patrick McIntyre, Jr.
Executive Director and
State Historic Preservation Officer

EPM/jyg

RECEIVED
DEC 24 2013
MICHAEL BAKER JR., INC.
COLUMBIA OFFICE

Appendix E

Hazardous Materials Database Report

Mcghee Tyson Airport
2055 Alcoa Highway
Louisville, TN 37777

Inquiry Number: 3733572.1s
September 19, 2013

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

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GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

2055 ALCOA HIGHWAY
LOUISVILLE, TN 37777

COORDINATES

Latitude (North):	35.8112000 - 35° 48' 40.32''
Longitude (West):	83.9938000 - 83° 59' 37.68''
Universal Tranverse Mercator:	Zone 17
UTM X (Meters):	229488.7
UTM Y (Meters):	3966945.5
Elevation:	967 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	35083-G8 MARYVILLE, TN
Most Recent Revision:	1979
West Map:	35084-G1 LOUISVILLE, TN
Most Recent Revision:	1984

AERIAL PHOTOGRAPHY IN THIS REPORT

Photo Year:	2012
Source:	USDA

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL---------- National Priority List

EXECUTIVE SUMMARY

Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP ---------- CERCLIS No Further Remedial Action Planned

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators

Federal institutional controls / engineering controls registries

US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls
LUCIS ---------- Land Use Control Information System

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State- and tribal - equivalent NPL

SHWS ---------- List of Inactive Hazardous Substance Sites

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ---------- Solid Waste Disposal Facilities

State and tribal leaking storage tank lists

INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

AST ---------- Aboveground Storage Tanks
INDIAN UST ---------- Underground Storage Tanks on Indian Land
FEMA UST ---------- Underground Storage Tank Listing

EXECUTIVE SUMMARY

State and tribal institutional control / engineering control registries

ENG CONTROLS ..... Engineering Control Sites
INST CONTROL ..... Institutional Control Sites

State and tribal voluntary cleanup sites

INDIAN VCP ..... Voluntary Cleanup Priority Listing
VCP ..... Voluntary Cleanup, Oversight and Assistance Program Sites
SRP ..... State Remediation Program List

State and tribal Brownfields sites

BROWNFIELDS ..... Superfund VOAP Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

ODI ..... Open Dump Inventory
DEBRIS REGION 9 ..... Torres Martinez Reservation Illegal Dump Site Locations
INDIAN ODI ..... Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL ..... Clandestine Drug Labs
DEL SHWS ..... Deleted State Hazardous Waste Sites
PRIORITYCLEANERS ..... DCERP Remediation Sites Listing
CDL ..... Registry of Contaminated Properties
US HIST CDL ..... National Clandestine Laboratory Register

Local Land Records

LIENS 2 ..... CERCLA Lien Information
LIENS ..... Liens Information

Records of Emergency Release Reports

HMIRS ..... Hazardous Materials Information Reporting System
SPILLS ..... State Spills

Other Ascertainable Records

DOT OPS ..... Incident and Accident Data
DOD ..... Department of Defense Sites
FUDS ..... Formerly Used Defense Sites
CONSENT ..... Superfund (CERCLA) Consent Decrees
ROD ..... Records Of Decision
UMTRA ..... Uranium Mill Tailings Sites

US MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System
RMP	Risk Management Plans
DRYCLEANERS	Registered Facilities List
NPDES	Permitted Facility Listing
AIRS	Listing of Permitted Sources
INDIAN RESERV	Indian Reservations
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US AIRS	Aerometric Information Retrieval System Facility Subsystem
PRP	Potentially Responsible Parties
2020 COR ACTION	2020 Corrective Action Program List
LEAD SMELTERS	Lead Smelter Sites
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
EPA WATCH LIST	EPA WATCH LIST
US FIN ASSUR	Financial Assurance Information
PCB TRANSFORMER	PCB Transformer Registration Database
COAL ASH DOE	Steam-Electric Plant Operation Data

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal CERCLIS list

EXECUTIVE SUMMARY

CERCLIS: The Comprehensive Environmental Response, Compensation and Liability Information System contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

A review of the CERCLIS list, as provided by EDR, and dated 04/26/2013 has revealed that there is 1 CERCLIS site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
MCGHEE TYSON AIR NATIONAL GUAR	***320 POST AVENUE***	***NW 1/4 - 1/2 (0.254 mi.)***	***24***	***89***

Federal RCRA generators list

RCRA-CESQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-CESQG list, as provided by EDR, and dated 07/11/2013 has revealed that there is 1 RCRA-CESQG site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
UNITED PARCEL SERVICE	2085 AIRBASE ROAD	N 1/8 - 1/4 (0.248 mi.)	21	86

State and tribal leaking storage tank lists

LUST: A listing of leaking underground storage tank site locations.

A review of the LUST list, as provided by EDR, and dated 07/02/2013 has revealed that there are 10 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TENNESSEE AIR NATIONAL GUARD Current Status: 8 Case Closed	420 POST RD	WNW 1/4 - 1/2 (0.252 mi.)	23	88

Lower Elevation	Address	Direction / Distance	Map ID	Page
TENNESSEE AIR NATIONAL GUARD Current Status: 8 Case Closed	***90 BRISCOE DRIVE***	***WNW 1/8 - 1/4 (0.135 mi.)***	***C11***	***22***
CHEROKEE AVIATION INC. Current Status: 1a Completed Tank Closure	***2285 ALCOA HIGHWAY***	***E 1/8 - 1/4 (0.212 mi.)***	***E14***	***52***
CHEROKEE AVIATION INC. Current Status: 8 Case Closed	***2285 AIRPORT HIGHWAY***	***E 1/8 - 1/4 (0.212 mi.)***	***E15***	***62***
KNOX-AIR INC. Current Status: 8 Case Closed	***2221 AIRPORT HWY***	***ESE 1/8 - 1/4 (0.245 mi.)***	***F20***	***84***
BUDGET RENT-A-CAR Current Status: 1a Completed Tank Closure Current Status: 8 Case Closed	***2212 AIRPORT HWY***	***ESE 1/4 - 1/2 (0.269 mi.)***	***F25***	***98***

Lower Elevation	Address	Direction / Distance	Map ID	Page
ALUMINUM CO. OF AMER/NORTH PLA	***2300 NORTH WRIGHT ROAD***	***ENE 1/4 - 1/2 (0.286 mi.)***	***G27***	***103***
Current Status: 8 Case Closed				
EZ FOOD STOP MART #12	***2768 AIRPORT HIGHWAY***	***NE 1/4 - 1/2 (0.332 mi.)***	***H28***	***127***
Current Status: 8 Case Closed				
FARRPORT MARKET	***2777 ALCOA HIGHWAY***	***NE 1/4 - 1/2 (0.355 mi.)***	***H30***	***146***
Current Status: 1a Completed Tank Closure				
KNOXVILLE AIRPORT HILTON	***2001 ALCOA HIGHWAY***	***SE 1/4 - 1/2 (0.381 mi.)***	***31***	***149***
Current Status: 1a Completed Tank Closure				

LUST TRUST: This list contains information on sites that had accidental releases of petroleum and are eligible for reimbursement from the TN Petroleum UST Fund.

A review of the LUST TRUST list, as provided by EDR, and dated 01/03/2013 has revealed that there are 5 LUST TRUST sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
HERTZ RENT A CAR	***MCGHEE TYSON AIRPORT***	***0 - 1/8 (0.000 mi.)***	***A1***	***7***
NATIONAL CAR RENTAL	***MCGHEE TYSON AIRPORT***	***0 - 1/8 (0.000 mi.)***	***A7***	***18***
CHEROKEE AVIATION INC.	***2285 AIRPORT HIGHWAY***	***E 1/8 - 1/4 (0.212 mi.)***	***E15***	***62***
KNOX-AIR INC.	***2221 AIRPORT HWY***	***ESE 1/8 - 1/4 (0.245 mi.)***	***F20***	***84***
EZ FOOD STOP MART #12	***2768 AIRPORT HIGHWAY***	***NE 1/4 - 1/2 (0.332 mi.)***	***H28***	***127***

HIST_LUST CO: From Dep of Environment and Conservation. The sites are in the list of sites that had accidental releases of petroleum and are eligible for reimbursement from TN Petroleum UST fund

A review of the HIST_LUST CO list, as provided by EDR, and dated 10/18/1994 has revealed that there is 1 HIST_LUST CO site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
E/Z STOP FOOD MARKET	2768 AIRPORT HWY	NE 1/4 - 1/2 (0.332 mi.)	H29	146

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environment & Conservation's Facility and Tank Report.

A review of the UST list, as provided by EDR, and dated 06/18/2013 has revealed that there are 4 UST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
TENNESSEE AIR NATIONAL GUARD	***90 BRISCOE DRIVE***	***WNW 1/8 - 1/4 (0.135 mi.)***	***C11***	***22***
Tank Status: Permanently Out of Use				
Tank Status: Currently In Use				
MR. GAS MARKET #20	***2670 AIRPORT HIGHWAY***	***ENE 1/8 - 1/4 (0.171 mi.)***	***D13***	***42***
Tank Status: Permanently Out of Use				
Tank Status: Currently In Use				

Lower Elevation	Address	Direction / Distance	Map ID	Page
CHEROKEE AVIATION INC. Tank Status: Permanently Out of Use	***2285 ALCOA HIGHWAY***	***E 1/8 - 1/4 (0.212 mi.)***	***E14***	***52***
GLOBAL MOTORS Tank Status: Permanently Out of Use	2284 ALCOA HIGHWAY	E 1/8 - 1/4 (0.229 mi.)	E18	76

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY: A listing of recycling facility locations.

A review of the SWRCY list, as provided by EDR, and dated 03/26/2013 has revealed that there is 1 SWRCY site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported	***2300 N WRIGHT ROAD***	***ENE 1/4 - 1/2 (0.285 mi.)***	***G26***	***101***

Local Lists of Registered Storage Tanks

HIST UST: This database is no longer updated by the agency. It contains records and detail fields that the current UST database does not.

A review of the HIST UST list, as provided by EDR, and dated 06/18/2013 has revealed that there are 7 HIST UST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
HERTZ RENT A CAR	***MCGHEE TYSON AIRPORT***	***0 - 1/8 (0.000 mi.)***	***A1***	***7***
NATIONAL CAR RENTAL	***MCGHEE TYSON AIRPORT***	***0 - 1/8 (0.000 mi.)***	***A7***	***18***
TENNESSEE AIR NATIONAL GUARD	***90 BRISCOE DRIVE***	***WNW 1/8 - 1/4 (0.135 mi.)***	***C11***	***22***
MR. GAS MARKET #20	***2670 AIRPORT HIGHWAY***	***ENE 1/8 - 1/4 (0.171 mi.)***	***D13***	***42***
CHEROKEE AVIATION INC.	***2285 AIRPORT HIGHWAY***	***E 1/8 - 1/4 (0.212 mi.)***	***E15***	***62***
GLOBAL MOTORS	2284 ALCOA HIGHWAY	E 1/8 - 1/4 (0.229 mi.)	E17	75
KNOX-AIR INC.	2221 AIRPORT HIGHWAY	ESE 1/8 - 1/4 (0.245 mi.)	F19	77

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 07/11/2013 has revealed that

there are 8 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
ARMY AVIATION SUPPORT FACILITY	*AASF #1 AIRBASE ROAD MC*	*0 - 1/8 (0.000 mi.)*	*A2*	*10*
RICK MCGILLS AIRPORT TOYOTA	*NORTH OF MCGHEE TYSON A*	*0 - 1/8 (0.000 mi.)*	*A3*	*11*
CHEROKEE AVIATION CORPORATION	*MCGHEE TYSON AIRPORT*	*0 - 1/8 (0.000 mi.)*	*A4*	*15*
KNOXVILLE AIR CARGO INC	*MC GHEE TYSON AIRPORT*	*0 - 1/8 (0.000 mi.)*	*A5*	*16*
AMERICAN EAGLE	*ALCOA HWY MCGEE/TYSON A*	*0 - 1/8 (0.000 mi.)*	*A6*	*17*
FEDERAL EXPRESS CORPORATION	*2445 AIRPORT HIGHWAY KN*	*ENE 0 - 1/8 (0.123 mi.)*	*B9*	*20*
CHEROKEE AVIATION INC.	*2285 AIRPORT HIGHWAY*	*E 1/8 - 1/4 (0.212 mi.)*	*E15*	*62*
DAVIS PRINTING CO	*202 CUSICK AVENUE*	*ENE 1/8 - 1/4 (0.229 mi.)*	*16*	*74*

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR US Hist Auto Stat: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR US Hist Auto Stat list, as provided by EDR, has revealed that there are 2 EDR US Hist Auto Stat sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported	2670 ALCOA HWY	ENE 1/8 - 1/4 (0.171 mi.)	D12	41
Not reported	217 AIRPORT PLAZA BLVD	ENE 1/8 - 1/4 (0.250 mi.)	22	88

EDR US Hist Cleaners: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR US Hist Cleaners list, as provided by EDR, has revealed that there are 2 EDR US Hist Cleaners sites within approximately 0.25 miles of the target property.

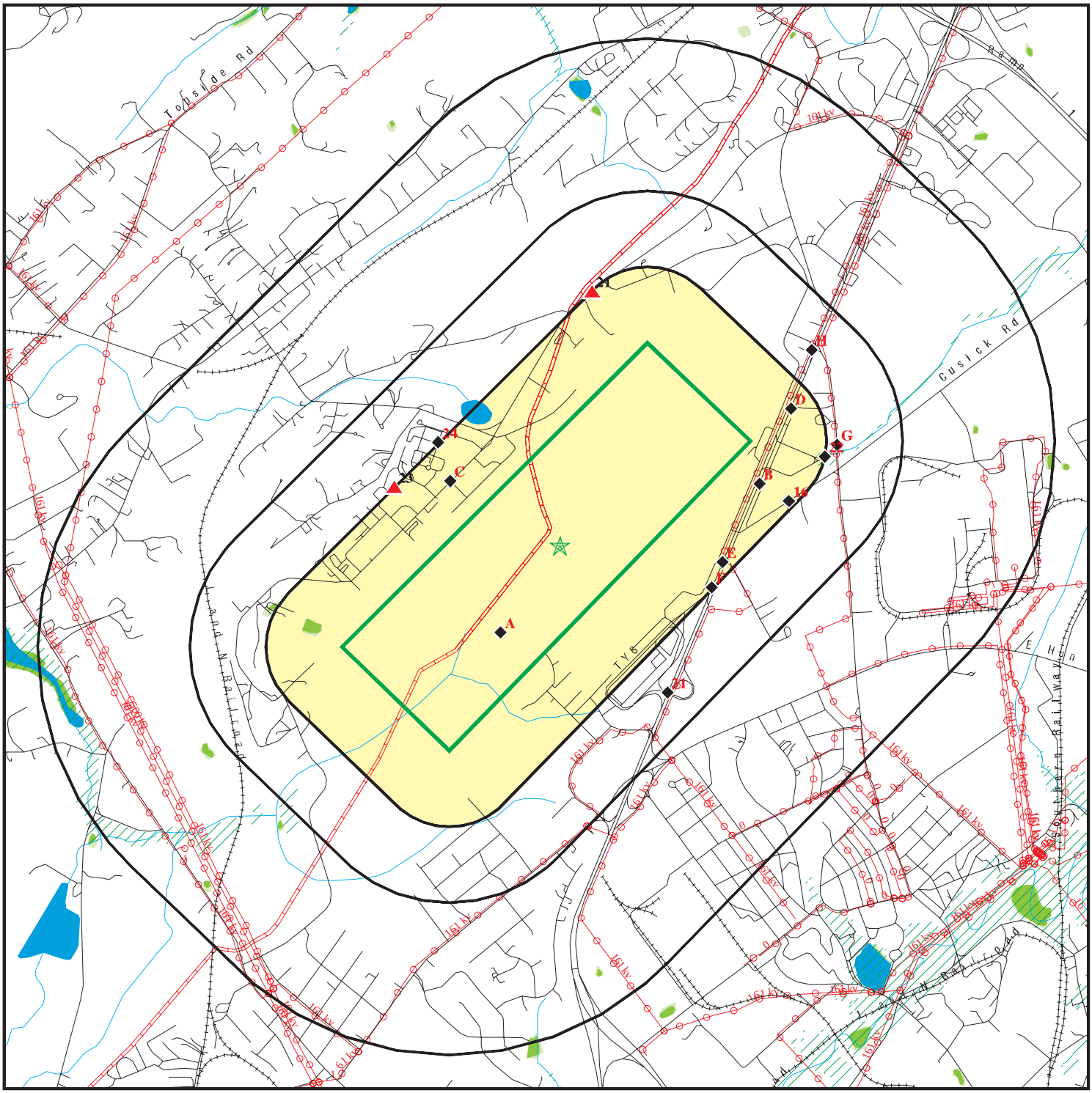
Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported	2506 ALCOA HWY	ENE 0 - 1/8 (0.120 mi.)	B8	20
Not reported	90 BRISCOE DR	WNW 1/8 - 1/4 (0.135 mi.)	C10	21

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 39 records.

Site Name	Database(s)
TYS RTR	HIST UST
TYS ASR	HIST UST
BUI ALS	HIST UST
NEW FA ATCT	HIST UST
DELTA AIRLINES INC.	HIST UST
MURPHY SURF-AIR(PREV.KNOX AIR)	HIST UST
MENTOR MARKET AND DELI	HIST UST
LAKESIDE BAIT AND TACKLE	HIST UST
BLOUNT KNOX TRACTOR	HIST UST
AIRBASE MARKET	HIST UST
FIBERGLASS CONCEPTS	HIST UST
CHARLES R. HICKS	HIST UST
ALCOA/POWDER & PIGMENT LDFLS	CERC-NFRAP
METRO KNOXVILLE AIRPORT AUTH.	LUST
DELTA AIRLINES INC.	LUST
HERTZ RENT A CAR	LUST
NEW FA ATCT	LUST
NATIONAL CAR RENTAL	LUST
HERTZ RENT-A-CAR	LUST
HACKNEY FOOD SERVICE	LUST
LAKEVIEW MARKET AMOCO	LUST
MCGHEE TYSON AIRPORT	UST
AVIS RENT A CAR SYSTEM, INC. - KNO	FINDS, UST
TYS ASR	UST
TYS RTR	UST
BUI ALS	UST
NEW FA ATCT	UST
MURPHY SURF-AIR(PREV.KNOX AIR)	UST
DELTA AIRLINES INC.	UST
MENTOR MARKET AND DELI	UST
LAKESIDE BAIT AND TACKLE	UST
BLOUNT KNOX TRACTOR	UST
AIRBASE MARKET	UST
FIBERGLASS CONCEPTS	UST
CHARLES R. HICKS	UST
VERTIFLITE INC	RCRA NonGen / NLR, FINDS
FEDERAL AVIATION ADMINISTRATION-AI	RCRA NonGen / NLR, FINDS
MCGHEE TYSON AIR NATIONAL GUARD BA	FINDS
MCGHEE TYSON AIRPORT - ALCOA	NPDES

OVERVIEW MAP - 3733572.1s



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Mcghee Tyson Airport	CLIENT: Michael Baker Jr. Inc
ADDRESS: 2055 Alcoa Highway Louisville TN 37777	CONTACT: Laura Stevens
LAT/LONG: 35.8112 / 83.9938	INQUIRY #: 3733572.1s DATE: September 19, 2013 4:27 pm

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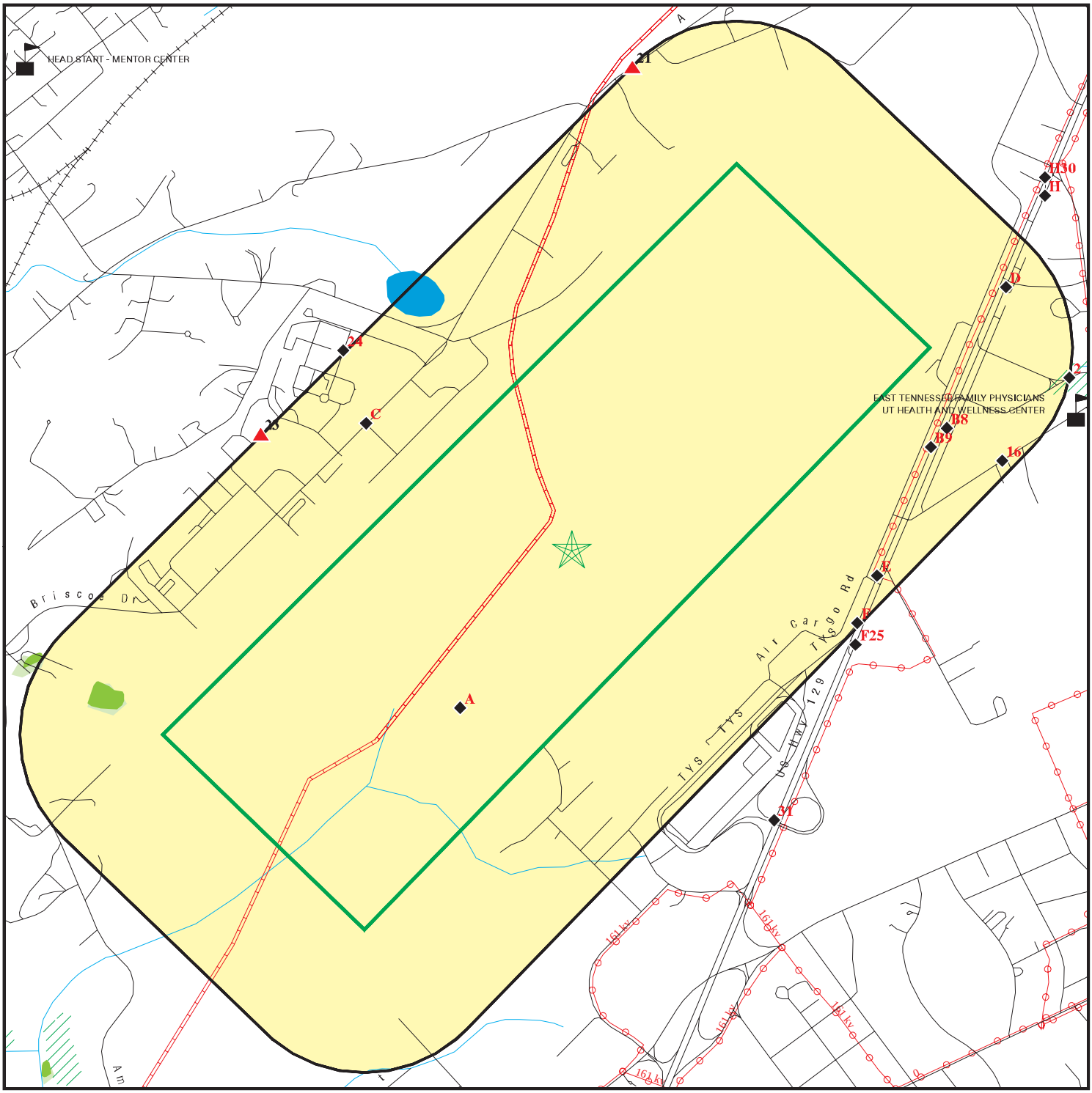
DETAIL MAP - 3733572.1s



0 1/8 1/4 1/2 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Mcghee Tyson Airport	CLIENT:	Michael Baker Jr. Inc
ADDRESS:	2055 Alcoa Highway Louisville TN 37777	CONTACT:	Laura Stevens
		INQUIRY #:	3733572.1s
LAT/LONG:	35.8112 / 83.9938	DATE:	September 19, 2013 4:33 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS	0.500		0	0	1	NR	NR	1
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-CESQG	0.250		0	1	NR	NR	NR	1
Federal institutional controls / engineering controls registries								
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
LUCIS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
SHWS	1.000		0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	4	6	NR	NR	10
LUST TRUST	0.500		2	2	1	NR	NR	5
HIST_LUST CO	0.500		0	0	1	NR	NR	1
INDIAN LUST	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
State and tribal registered storage tank lists								
UST	0.250		0	4	NR	NR	NR	4
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
FEMA UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
ENG CONTROLS	0.500		0	0	0	NR	NR	0
INST CONTROL	0.500		0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
SRP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	1	NR	NR	1
INDIAN ODI	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL	TP		NR	NR	NR	NR	NR	0
DEL SHWS	1.000		0	0	0	0	NR	0
PRIORITYCLEANERS	0.500		0	0	0	NR	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
US HIST CDL	TP		NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
HIST UST	0.250		2	5	NR	NR	NR	7
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
LIENS	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
SPILLS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		6	2	NR	NR	NR	8
DOT OPS	TP		NR	NR	NR	NR	NR	0
DOD	1.000		0	0	0	0	NR	0
FUDS	1.000		0	0	0	0	NR	0
CONSENT	1.000		0	0	0	0	NR	0
ROD	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
AIRS	TP		NR	NR	NR	NR	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR US Hist Auto Stat	0.250		0	2	NR	NR	NR	2
EDR US Hist Cleaners	0.250		1	1	NR	NR	NR	2

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 **HERTZ RENT A CAR** **LUST TRUST** **U002099064**
MCGHEE TYSON AIRPORT **HIST UST** **N/A**
< 1/8 **ALCOA, TN**
1 ft.

Site 1 of 7 in cluster A

Relative:
Lower

Actual:
956 ft.

LUST TRUST:

Facility Id:	2050093
Case Number:	1
Application Num:	95170
Tank Owner:	THE HERTZ CORPORATION
Owner Id:	4247
Deductible:	$20,000.00
Applied Requested:	Not reported
Applied Not Eligible:	Not reported
Applied Net Pay:	Not reported
Applied Deductible:	Not reported
Applied Payment:	Not reported
Total Requested:	$219,542.38
Total Not Eligible:	$60,444.90
Total Paid:	$139,097.48
Total Net Pay:	$159,097.48
Case Status:	**CLOSED**

HIST UST:

Facility ID:	2-050093
Facility Description:	Auto Dealership
Owner ID:	4247
Owner Name:	HERTZ CORPORATION
Owner Address:	Attn: Tracy Masella 225 Brae Blvd.
Owner City,St,Zip:	Park Ridge, NJ 07656
Owner Telephone:	(201) 307-2831
Owner Description:	Commercial
Tank ID:	2
Tank Status:	**Currently in Use**
Tank Capacity:	10000
Tank Contents:	Gasoline
Tank Material:	Fiberglass Reinforced Plastic
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	True
Tank ATG:	True
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	True
Spill Installed:	True
Cathodic Protection:	True
Date Installed:	05/02/1974
Tank Leak Detection Listed:	False
Pipe Material:	Fiberglass Reinforced Plastic
Pipe Other Material:	None
Pipe Type:	Pressurized
Pipe Auto Line Leak Detect.:	True
Pipe Leak Detection Listed:	False

HERTZ RENT A CAR (Continued) **U002099064**

Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	False

Tank ID:	4
Tank Status:	**Permanently Out of Use**
Tank Capacity:	550
Tank Contents:	Used Oil
Tank Material:	Fiberglass Reinforced Plastic
Tank 2ndary Trait:	None
Tank Manual Gauge:	True
Tank Tightness:	False
Tank Inventory Control:	True
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	True
Spill Installed:	True
Cathodic Protection:	False
Date Installed:	05/02/1974
Tank Leak Detection Listed:	False
Pipe Material:	Bare Steel
Pipe Other Material:	None
Pipe Type:	Gravity Feed
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	1
Tank Status:	**Currently in Use**
Tank Capacity:	10000
Tank Contents:	Gasoline
Tank Material:	Fiberglass Reinforced Plastic
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	True
Tank ATG:	True
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	True

HERTZ RENT A CAR (Continued) **U002099064**

Spill Installed:	True
Cathodic Protection:	True
Date Installed:	05/02/1974
Tank Leak Detection Listed:	False
Pipe Material:	Fiberglass Reinforced Plastic
Pipe Other Material:	None
Pipe Type:	Pressurized
Pipe Auto Line Leak Detect.:	True
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	False

Tank ID:	3
Tank Status:	**Permanently Out of Use**
Tank Capacity:	550
Tank Contents:	Motor Oil
Tank Material:	Fiberglass Reinforced Plastic
Tank 2ndary Trait:	None
Tank Manual Gauge:	True
Tank Tightness:	False
Tank Inventory Control:	True
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	True
Cathodic Protection:	False
Date Installed:	05/02/1974
Tank Leak Detection Listed:	False
Pipe Material:	Bare Steel
Pipe Other Material:	None
Pipe Type:	U.S. Suction
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

A2 **ARMY AVIATION SUPPORT FACILITY #2** **RCRA NonGen / NLR** **1000922167**
AASF #1 AIRBASE ROAD MCGEE-TYS **FINDS** **TND981919038**
< 1/8 **LOUISVILLE, TN 37777**
1 ft.

Site 2 of 7 in cluster A

Relative:
Lower

Actual:
956 ft.

RCRA NonGen / NLR:

Date form received by agency:	02/27/2004
Facility name:	ARMY AVIATION SUPPORT FACILITY #2
Facility address:	AASF #1 AIRBASE ROAD MCGEE-TYS LOUISVILLE, TN 37777-630
EPA ID:	TND981919038
Mailing address:	HQ TNARNG HOUSTON BARRACKS PO NASHVILLE, TN 372041501
Contact:	PAUL PIEREPONT
Contact address:	AASF #1 AIRBASE ROAD MCGEE-TYS LOUISVILLE, TN 37777
Contact country:	US
Contact telephone:	(865) 985-4617
Contact email:	GREG.FINNEY@TN.NGB.ARMY.MIL
EPA Region:	04
Land type:	Other land type
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	CPT MEL CLAWSON
Owner/operator address:	ARMY DRIVE LOUISVILLE, TN 37777
Owner/operator country:	US
Owner/operator telephone:	(865) 985-4605
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	02/27/2004
Owner/Op end date:	Not reported

Owner/operator name:	TENNESSEE ARMY NATIONAL GUARD
Owner/operator address:	AASF #1 AIRBASE ROAD MCGEE-TYS LOUISVILLE, TN 37777
Owner/operator country:	US
Owner/operator telephone:	(865) 985-4605
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	02/27/2004
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No

ARMY AVIATION SUPPORT FACILITY #2 (Continued) **1000922167**

Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Universal Waste Summary:
Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: Yes

Historical Generators:
Date form received by agency: 06/06/1994
Facility name: ARMY AVIATION SUPPORT FACILITY #2
Classification: Not a generator, verified

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 06/06/1994
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 01/06/1988
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110032754678

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

A3 **RICK MCGILLS AIRPORT TOYOTA** **RCRA NonGen / NLR** **1000348828**
NORTH OF MCGHEE TYSON AIRPORT **FINDS** **TND030685994**
< 1/8 **ALCOA, TN**
1 ft.

Site 3 of 7 in cluster A

Relative: Lower

Actual: 956 ft.

RCRA NonGen / NLR:
Date form received by agency: 02/24/2004
Facility name: RICK MCGILLS AIRPORT TOYOTA
Facility address: NORTH OF MCGHEE TYSON AIRPORT
ALCOA, TN 37701
EPA ID: TND030685994
Mailing address: AIRPORT HWY.
ALCOA, TN 37701

RICK MCGILLS AIRPORT TOYOTA (Continued) **1000348828**

Contact:	RICK MCGILL
Contact address:	NORTH OF MCGHEE TYSON AIRPORT ALCOA, TN 37701
Contact country:	US
Contact telephone:	(423) 970-2615
Contact email:	Not reported
EPA Region:	04
Land type:	Other land type
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	02/27/1998
Facility name:	RICK MCGILLS AIRPORT TOYOTA
Classification:	Not a generator, verified

Facility Has Received Notices of Violations:

Regulation violated:	SR - .11(3)(c)3(i)
Area of violation:	Generators - General
Date violation determined:	11/06/1998
Date achieved compliance:	12/01/1998
Violation lead agency:	State
Enforcement action:	WRITTEN INFORMAL
Enforcement action date:	11/06/1998
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	State
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported

Regulation violated:	SR - .03(4)(e)5(i)
Area of violation:	Generators - Pre-transport
Date violation determined:	07/17/1996
Date achieved compliance:	07/17/1996
Violation lead agency:	State
Enforcement action:	WRITTEN INFORMAL
Enforcement action date:	07/24/1996
Enf. disposition status:	Not reported

RICK MCGILLS AIRPORT TOYOTA (Continued) **1000348828**

Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - .03(4)(e)5
Area of violation: Generators - Pre-transport
Date violation determined: 07/17/1996
Date achieved compliance: 07/17/1996
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 07/24/1996
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - .11(1)(a)
Area of violation: Generators - Pre-transport
Date violation determined: 07/17/1996
Date achieved compliance: 07/17/1996
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 07/24/1996
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - .03(4)(e)5(ii)
Area of violation: Generators - Pre-transport
Date violation determined: 07/16/1996
Date achieved compliance: 07/17/1996
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 07/24/1996
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - .03(5)(c)2
Area of violation: Generators - Records/Reporting
Date violation determined: 02/23/1994
Date achieved compliance: 03/28/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 02/25/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported

RICK MCGILLS AIRPORT TOYOTA (Continued) **1000348828**

Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 06/03/1999
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 11/06/1998
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 12/01/1998
Evaluation lead agency: State

Evaluation date: 07/17/1996
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Pre-transport
Date achieved compliance: 07/17/1996
Evaluation lead agency: State

Evaluation date: 02/23/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Records/Reporting
Date achieved compliance: 03/28/1994
Evaluation lead agency: State

Evaluation date: 07/08/1987
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 03/25/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 02/24/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110007852190

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA

RICK MCGILLS AIRPORT TOYOTA (Continued) **1000348828**

program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

A4 **CHEROKEE AVIATION CORPORATION** **RCRA NonGen / NLR** **1000915913**
MCGHEE TYSON AIRPORT **FINDS** **TND034690057**
< 1/8 **ALCOA, TN**
1 ft.

Site 4 of 7 in cluster A

Relative:
Lower

Actual:
956 ft.

RCRA NonGen / NLR:

Date form received by agency:	11/19/1980
Facility name:	CHEROKEE AVIATION CORPORATION
Facility address:	MCGHEE TYSON AIRPORT ALCOA, TN 37701
EPA ID:	TND034690057
Mailing address:	PO BOX 626 ALCOA, TN 37701
Contact:	CHEROKEE AVIATION
Contact address:	MCGHEE TYSON AIRPORT ALCOA, TN 37701
Contact country:	US
Contact telephone:	(615) 555-1212
Contact email:	Not reported
EPA Region:	04
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

FINDS:

Registry ID: 110007852957

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

A5 **KNOXVILLE AIR CARGO INC** **RCRA NonGen / NLR** **1000917387**
MC GHEE TYSON AIRPORT **FINDS** **TND066709619**
< 1/8 **ALCOA, TN**
1 ft.

Site 5 of 7 in cluster A

Relative:
Lower

Actual:
956 ft.

RCRA NonGen / NLR:

Date form received by agency:	11/19/1980
Facility name:	KNOXVILLE AIR CARGO INC
Facility address:	MC GHEE TYSON AIRPORT ALCOA, TN 37701
EPA ID:	TND066709619
Contact:	KNOXVILLE AIR
Contact address:	MC GHEE TYSON AIRPORT ALCOA, TN 37701
Contact country:	US
Contact telephone:	(615) 555-1212
Contact email:	Not reported
EPA Region:	04
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

FINDS:

Registry ID: 110007862713

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

A6 **AMERICAN EAGLE** **RCRA NonGen / NLR** **1000919560**
ALCOA HWY MCGEE/TYSON AIRPORT **FINDS** **TN0000146084**
< 1/8 **ALCOA, TN**
1 ft.

Site 6 of 7 in cluster A

Relative:
Lower

Actual:
956 ft.

RCRA NonGen / NLR:

Date form received by agency:	02/24/1995
Facility name:	AMERICAN EAGLE
Facility address:	ALCOA HWY MCGEE/TYSON AIRPORT ALCOA, TN 37701
EPA ID:	TN0000146084
Mailing address:	INT'L PLAZA SUITE 900 NASHVILLE, TN 37217
Contact:	BILL PULLING
Contact address:	ALCOA HWY MCGEE/TYSON AIRPORT ALCOA, TN 37701
Contact country:	US
Contact telephone:	(615) 399-6356
Contact email:	Not reported
EPA Region:	04
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

FINDS:

Registry ID: 110007842941

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

A7
< 1/8
1 ft.

NATIONAL CAR RENTAL
MCGHEE TYSON AIRPORT
ALCOA, TN

LUST TRUST
HIST UST

U002099084
N/A

Site 7 of 7 in cluster A

Relative:
Lower

Actual:
956 ft.

LUST TRUST:

Facility Id:	2050135
Case Number:	1
Application Num:	98253
Tank Owner:	GENERAL MOTORS CORP
Owner Id:	6768
Deductible:	$10,025.37
Applied Requested:	Not reported
Applied Not Eligible:	Not reported
Applied Net Pay:	Not reported
Applied Deductible:	Not reported
Applied Payment:	Not reported
Total Requested:	$61,392.76
Total Not Eligible:	$11,265.90
Total Paid:	$40,101.49
Total Net Pay:	$50,126.86
Case Status:	**CLOSED**

HIST UST:

Facility ID:	2-050135
Facility Description:	Other
Owner ID:	158294
Owner Name:	Vanguard Car Rental USA Inc.
Owner Address:	c/o Paul Hastings 1299 Pennsylvania Avenue North West 10th
Owner City,St,Zip:	Washington, DC 20004
Owner Telephone:	(202) 508-9785
Owner Description:	Private
Tank ID:	2
Tank Status:	**Permanently Out of Use**
Tank Capacity:	10000
Tank Contents:	Gasoline
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	True
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	True
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	04/01/1982
Tank Leak Detection Listed:	False
Pipe Material:	Galvanized Steel
Pipe Other Material:	None
Pipe Type:	Pressurized
Pipe Auto Line Leak Detect.:	True
Pipe Leak Detection Listed:	True

NATIONAL CAR RENTAL (Continued) **U002099084**

Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	True
Pipe Leak Detection Listed:	False

Tank ID:	1
Tank Status:	**Permanently Out of Use**
Tank Capacity:	10000
Tank Contents:	Gasoline
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	True
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	04/01/1982
Tank Leak Detection Listed:	False
Pipe Material:	Galvanized Steel
Pipe Other Material:	None
Pipe Type:	Pressurized
Pipe Auto Line Leak Detect.:	True
Pipe Leak Detection Listed:	True
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	True
Pipe Leak Detection Listed:	False

Tank ID:	3
Tank Status:	**Currently In Use**
Tank Capacity:	12000
Tank Contents:	Gasoline
Tank Material:	Fiberglass Reinforced Plastic
Tank 2ndary Trait:	Double-Walled
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	True
Overfill Installed:	True

NATIONAL CAR RENTAL (Continued) **U002099084**

Spill Installed:	True
Cathodic Protection:	True
Date Installed:	11/30/1996
Tank Leak Detection Listed:	False
Pipe Material:	Fiberglass Reinforced Plastic
Pipe Other Material:	Double-Walled
Pipe Type:	Pressurized
Pipe Auto Line Leak Detect.:	True
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	True
Pipe Leak Detection Listed:	False

B8 **EDR US Hist Cleaners** **1015028099**
ENE **2506 ALCOA HWY** **N/A**
< 1/8 **ALCOA, TN 37701**
0.120 mi.
631 ft. **Site 1 of 2 in cluster B**

Relative:
Lower

Actual:
926 ft.

EDR Historical Cleaners:

Name:	AIRPORT CLEANERS & LAUNDRY
Year:	1999
Address:	2506 ALCOA HWY

B9 **FEDERAL EXPRESS CORPORATION** **RCRA NonGen / NLR** **1001483611**
ENE **2445 AIRPORT HIGHWAY KNOXVILLE** **FINDS** **TND987776473**
< 1/8 **ALCOA, TN 37701**
0.123 mi.
649 ft. **Site 2 of 2 in cluster B**

Relative:
Lower

Actual:
926 ft.

RCRA NonGen / NLR:

Date form received by agency:	03/01/2004
Facility name:	FEDERAL EXPRESS CORPORATION
Facility address:	2445 AIRPORT HIGHWAY KNOXVILLE ALCOA, TN 37701
EPA ID:	TND987776473
Mailing address:	AIRPORT HIGHWAY KNOXVILLE, TN 37701
Contact:	MICK COPELAND
Contact address:	2445 AIRPORT HIGHWAY KNOXVILLE ALCOA, TN 37701
Contact country:	US
Contact telephone:	(615) 970-4082
Contact email:	Not reported
EPA Region:	04
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No

FEDERAL EXPRESS CORPORATION (Continued) **1001483611**

Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 08/10/1995
Facility name: FEDERAL EXPRESS CORPORATION
Classification: Not a generator, verified

Violation Status: No violations found

FINDS:

Registry ID: 110006451213

Environmental Interest/Information System
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C10 **EDR US Hist Cleaners** **1015103972**
WNW **90 BRISCOE DR** **N/A**
1/8-1/4 **LOUISVILLE, TN 37777**
0.135 mi.
714 ft. **Site 1 of 2 in cluster C**

Relative:
Lower

Actual:
955 ft.

EDR Historical Cleaners:
Name: AIRPORT CLEANERS & LAUNDRY
Year: 1999
Address: 90 BRISCOE DR

Name: AIRPORT CLEANERS & LAUNDRY
Year: 2000
Address: 90 BRISCOE DR

Name: SOUTH KNOX DRY CLEANING
Year: 2002
Address: 90 BRISCOE DR

Name: SOUTH KNOX DRY CLEANING
Year: 2003
Address: 90 BRISCOE DR

Name: SOUTH KNOX DRY CLEANING
Year: 2004
Address: 90 BRISCOE DR

(Continued) **1015103972**

Name: SOUTH KNOX LAUNDRY & DRY CLEANERS
Year: 2005
Address: 90 BRISCOE DR

Name: SOUTH KNOX DRY CLEANING
Year: 2006
Address: 90 BRISCOE DR

Name: SOUTH KNOX LAUNDRY & DRY
Year: 2010
Address: 90 BRISCOE DR

Name: SOUTH KNOX LAUNDRY & DRY CLEANERS
Year: 2011
Address: 90 BRISCOE DR

Name: SOUTH KNOX LAUNDRY & DRY CLEANERS
Year: 2012
Address: 90 BRISCOE DR

C11 **TENNESSEE AIR NATIONAL GUARD** **LUST** **U002012390**
WNW **90 BRISCOE DRIVE** **UST** **N/A**
1/8-1/4 **LOUISVILLE, TN 37777** **HIST UST**
0.135 mi.
714 ft. **Site 2 of 2 in cluster C**

Relative:
Lower

Actual:
955 ft.

LUST:

Region:	STATE
Region Number:	2
Facility Id:	0050285
Case Number:	3
Current Status:	8 Case Closed
Product Released:	Not reported
Discovery Date:	Not reported
How Discovered:	2 Release Detection
Cause:	Not reported
Case Manager:	EWC
Case Description:	Failed ATG
Section:	FO
Priority:	Not reported
Consultant ID:	Not reported
Consultant Name:	Not reported
Consultant Contact:	Not reported
Consultant Contact Title:	Not reported
Consultant Contact First Name:	Not reported
Consultant Contact Last Name:	Not reported
Consultant Contact Address2:	Not reported
Consultant City:	Not reported
Consultant State:	Not reported
Consultant Telephone:	Not reported
Owner ID:	14527
Owner Name:	Not reported
Owner Contact:	Not reported
Owner Contact Title:	Not reported
Owner Contact First Name:	Not reported
Owner Contact Last Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported

TENNESSEE AIR NATIONAL GUARD (Continued) **U002012390**

Owner State:	Not reported
Owner Zip Code:	Not reported
Owner Telephone:	Not reported
Region:	STATE
Region Number:	2
Facility Id:	0050285
Case Number:	4
Current Status:	8 Case Closed
Product Released:	Not reported
Discovery Date:	07/02/2009
How Discovered:	2 Release Detection
Cause:	Not reported
Case Manager:	RAH
Case Description:	suspected release Tank 10a (plus unleaded)
Section:	FO
Priority:	Not reported
Consultant ID:	Not reported
Consultant Name:	Not reported
Consultant Contact:	Not reported
Consultant Contact Title:	Not reported
Consultant Contact First Name:	Not reported
Consultant Contact Last Name:	Not reported
Consultant Contact Address2:	Not reported
Consultant City:	Not reported
Consultant State:	Not reported
Consultant Telephone:	Not reported
Owner ID:	14527
Owner Name:	Not reported
Owner Contact:	Not reported
Owner Contact Title:	Not reported
Owner Contact First Name:	Not reported
Owner Contact Last Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
Owner Zip Code:	Not reported
Owner Telephone:	Not reported

UST:

Facility ID:	0050285
Facility Description:	Federal Military
Owner ID:	300056
Owner Name:	AAFES McGhee/Tyson BX
Owner Address:	90 Briscoe Drive
Owner Address 2:	McGhee Tyson ANG Base
Owner City,St,Zip:	Louisville, TN 37777
Owner Description:	Federal Government
Tank ID:	2
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	3000
Substance Description:	Diesel
Date Installed:	05/01/1956
Date Last Used:	06/12/1990
Date Closed:	06/12/1990
Regulated:	Regulated

TENNESSEE AIR NATIONAL GUARD (Continued) **U002012390**

Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Galvanized Steel
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	7
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	3000
Substance Description:	Diesel
Date Installed:	08/01/1954
Date Last Used:	08/31/1990
Date Closed:	04/06/1991
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False

TENNESSEE AIR NATIONAL GUARD (Continued) **U002012390**

Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Fiberglass Reinforced Plastic
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	8
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	3000
Substance Description:	Diesel
Date Installed:	03/01/1954
Date Last Used:	08/31/1990
Date Closed:	04/06/1991
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False

TENNESSEE AIR NATIONAL GUARD (Continued) **U002012390**

Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Fiberglass Reinforced Plastic
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	1
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	3000
Substance Description:	Gasoline
Date Installed:	06/01/1956
Date Last Used:	07/12/1992
Date Closed:	09/12/1992
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True

TENNESSEE AIR NATIONAL GUARD (Continued) **U002012390**

Pipe Mat Desc:	Galvanized Steel
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	3
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	5000
Substance Description:	Gasoline
Date Installed:	08/01/1975
Date Last Used:	02/04/1992
Date Closed:	02/04/1992
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Galvanized Steel
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False

TENNESSEE AIR NATIONAL GUARD (Continued) **U002012390**

Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	4
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	5000
Substance Description:	Gasoline
Date Installed:	08/01/1975
Date Last Used:	02/17/1994
Date Closed:	03/02/1995
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Galvanized Steel
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False

TENNESSEE AIR NATIONAL GUARD (Continued) **U002012390**

Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	5
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	6000
Substance Description:	Diesel
Date Installed:	03/01/1954
Date Last Used:	02/17/1994
Date Closed:	03/02/1995
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Fiberglass Reinforced Plastic
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False

TENNESSEE AIR NATIONAL GUARD (Continued) **U002012390**

Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	6
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	6000
Substance Description:	Gasoline
Date Installed:	06/01/1954
Date Last Used:	08/27/1992
Date Closed:	08/27/1992
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Fiberglass Reinforced Plastic
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

TENNESSEE AIR NATIONAL GUARD (Continued) **U002012390**

Tank ID:	12
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	8000
Substance Description:	Diesel
Date Installed:	10/01/1991
Date Last Used:	04/28/1995
Date Closed:	05/13/1995
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Composite (Steel w/FRP)
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	True
Tank ATG:	True
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Not Listed
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	True
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	True
Spill Installed:	True
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	9
Tank Status:	**Currently In Use**
Compartment Capacity:	10000
Substance Description:	Gasoline
Date Installed:	03/01/1993
Date Last Used:	Not reported

TENNESSEE AIR NATIONAL GUARD (Continued) **U002012390**

Date Closed:	Not reported
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Fiberglass Reinforced Plastic
Tank Mods Desc:	Double-Walled
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	True
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Fiberglass Reinforced Plastic
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	True
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Automatic Shut Off Device
Overfill Installed:	True
Spill Installed:	True
CP Met:	True
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	10
Tank Status:	**Currently In Use**
Compartment Capacity:	10000
Substance Description:	Gasoline
Date Installed:	03/01/1993
Date Last Used:	Not reported
Date Closed:	Not reported
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Fiberglass Reinforced Plastic
Tank Mods Desc:	Double-Walled
Tank Other Material:	Not reported

TENNESSEE AIR NATIONAL GUARD (Continued) **U002012390**

Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	True
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Fiberglass Reinforced Plastic
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	True
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Automatic Shut Off Device
Overfill Installed:	True
Spill Installed:	True
CP Met:	True
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	11
Tank Status:	**Currently In Use**
Compartment Capacity:	10000
Substance Description:	Gasoline
Date Installed:	03/01/1993
Date Last Used:	Not reported
Date Closed:	Not reported
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Fiberglass Reinforced Plastic
Tank Mods Desc:	Double-Walled
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	True
Tank Vapor Monitor:	False
Tank GW Monitor:	False

TENNESSEE AIR NATIONAL GUARD (Continued) **U002012390**

Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Fiberglass Reinforced Plastic
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	True
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Automatic Shut Off Device
Overfill Installed:	True
Spill Installed:	True
CP Met:	True
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

HIST UST:

Facility ID:	0-050285
Facility Description:	Federal Military
Owner ID:	14527
Owner Name:	134 Air Refueling Wing
Owner Address:	90 Briscoe Drive Mcghee Tyson ANG Base
Owner City,St,Zip:	Louisville, TN 37777
Owner Telephone:	(865) 342-3000
Owner Description:	Federal Government
Tank ID:	10
Tank Status:	**Currently in Use**
Tank Capacity:	10000
Tank Contents:	Gasoline
Tank Material:	Fiberglass Reinforced Plastic
Tank 2ndary Trait:	Double-Walled
Tank Manual Gauge:	False
Tank Tightness:	True
Tank Inventory Control:	False
Tank ATG:	True
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	True
Tank 2nd Contained:	False
Tank SIR:	False

TENNESSEE AIR NATIONAL GUARD (Continued) **U002012390**

Overfill Installed:	True
Spill Installed:	True
Cathodic Protection:	True
Date Installed:	03/01/1993
Tank Leak Detection Listed:	False
Pipe Material:	Fiberglass Reinforced Plastic
Pipe Other Material:	Double-Walled
Pipe Type:	Pressurized
Pipe Auto Line Leak Detect.:	True
Pipe Leak Detection Listed:	True
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	False

Tank ID:	3
Tank Status:	**Permanently Out of Use**
Tank Capacity:	5000
Tank Contents:	Gasoline
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	08/01/1975
Tank Leak Detection Listed:	True
Pipe Material:	Galvanized Steel
Pipe Other Material:	None
Pipe Type:	Safe Suction
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	4
Tank Status:	**Permanently Out of Use**
Tank Capacity:	5000
Tank Contents:	Gasoline
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None

TENNESSEE AIR NATIONAL GUARD (Continued) **U002012390**

Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	08/01/1975
Tank Leak Detection Listed:	True
Pipe Material:	Galvanized Steel
Pipe Other Material:	None
Pipe Type:	Safe Suction
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	8
Tank Status:	**Permanently Out of Use**
Tank Capacity:	3000
Tank Contents:	Diesel
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	03/01/1954
Tank Leak Detection Listed:	True
Pipe Material:	Fiberglass Reinforced Plastic
Pipe Other Material:	None
Pipe Type:	Safe Suction
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False

TENNESSEE AIR NATIONAL GUARD (Continued) **U002012390**

Pipe Leak Detection Listed: True

Tank ID: 6
Tank Status: **Permanently Out of Use**
Tank Capacity: 6000
Tank Contents: Gasoline
Tank Material: Asphalt Coated or Bare Steel
Tank 2ndary Trait: None
Tank Manual Gauge: False
Tank Tightness: False
Tank Inventory Control: False
Tank ATG: False
Tank Vapor Monitor: False
Tank Groundwater Monitor: False
Tank Double Walled: False
Tank 2nd Contained: False
Tank SIR: False
Overfill Installed: False
Spill Installed: False
Cathodic Protection: False
Date Installed: 06/01/1954
Tank Leak Detection Listed: True
Pipe Material: Fiberglass Reinforced Plastic
Pipe Other Material: None
Pipe Type: Safe Suction
Pipe Auto Line Leak Detect.: False
Pipe Leak Detection Listed: False
Pipe Vapor Monitor: False
Pipe Groundwater Monitor: False
Pipe Dbl Walled: Not reported
Pipe 2nd Contained: False
Pipe SIR: False
Pipe Leak Detection Listed: True

Tank ID: 11
Tank Status: **Currently in Use**
Tank Capacity: 10000
Tank Contents: Gasoline
Tank Material: Fiberglass Reinforced Plastic
Tank 2ndary Trait: Double-Walled
Tank Manual Gauge: False
Tank Tightness: True
Tank Inventory Control: False
Tank ATG: True
Tank Vapor Monitor: False
Tank Groundwater Monitor: False
Tank Double Walled: True
Tank 2nd Contained: False
Tank SIR: False
Overfill Installed: True
Spill Installed: True
Cathodic Protection: True
Date Installed: 03/01/1993
Tank Leak Detection Listed: False
Pipe Material: Fiberglass Reinforced Plastic

TENNESSEE AIR NATIONAL GUARD (Continued) **U002012390**

Pipe Other Material:	Double-Walled
Pipe Type:	Pressurized
Pipe Auto Line Leak Detect.:	True
Pipe Leak Detection Listed:	True
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	False

Tank ID:	2
Tank Status:	**Permanently Out of Use**
Tank Capacity:	3000
Tank Contents:	Diesel
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	05/01/1956
Tank Leak Detection Listed:	True
Pipe Material:	Galvanized Steel
Pipe Other Material:	None
Pipe Type:	U.S. Suction
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	5
Tank Status:	**Permanently Out of Use**
Tank Capacity:	6000
Tank Contents:	Diesel
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False

TENNESSEE AIR NATIONAL GUARD (Continued) **U002012390**

Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	03/01/1954
Tank Leak Detection Listed:	True
Pipe Material:	Fiberglass Reinforced Plastic
Pipe Other Material:	None
Pipe Type:	Safe Suction
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	9
Tank Status:	**Currently in Use**
Tank Capacity:	10000
Tank Contents:	Gasoline
Tank Material:	Fiberglass Reinforced Plastic
Tank 2ndary Trait:	Double-Walled
Tank Manual Gauge:	False
Tank Tightness:	True
Tank Inventory Control:	False
Tank ATG:	True
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	True
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	True
Spill Installed:	True
Cathodic Protection:	True
Date Installed:	03/01/1993
Tank Leak Detection Listed:	False
Pipe Material:	Fiberglass Reinforced Plastic
Pipe Other Material:	Double-Walled
Pipe Type:	Pressurized
Pipe Auto Line Leak Detect.:	True
Pipe Leak Detection Listed:	True
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	False

Tank ID:	7
Tank Status:	**Permanently Out of Use**
Tank Capacity:	3000

TENNESSEE AIR NATIONAL GUARD (Continued) **U002012390**

Tank Contents:	Diesel
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	08/01/1954
Tank Leak Detection Listed:	True
Pipe Material:	Fiberglass Reinforced Plastic
Pipe Other Material:	None
Pipe Type:	Safe Suction
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	1
Tank Status:	**Permanently Out of Use**
Tank Capacity:	3000
Tank Contents:	Gasoline
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	06/01/1956
Tank Leak Detection Listed:	True
Pipe Material:	Galvanized Steel
Pipe Other Material:	None
Pipe Type:	U.S. Suction
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False

TENNESSEE AIR NATIONAL GUARD (Continued) **U002012390**

Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	12
Tank Status:	**Permanently Out of Use**
Tank Capacity:	8000
Tank Contents:	Diesel
Tank Material:	Composite (Steel w/ FRP)
Tank 2ndary Trait:	None
Tank Manual Gauge:	True
Tank Tightness:	False
Tank Inventory Control:	True
Tank ATG:	True
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	True
Spill Installed:	True
Cathodic Protection:	False
Date Installed:	10/01/1991
Tank Leak Detection Listed:	False
Pipe Material:	Not Listed
Pipe Other Material:	Double-Walled
Pipe Type:	Pressurized
Pipe Auto Line Leak Detect.:	True
Pipe Leak Detection Listed:	True
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	False

D12 **EDR US Hist Auto Stat** **1015376810**
ENE **2670 ALCOA HWY** **N/A**
1/8-1/4 **ALCOA, TN 37701**
0.171 mi.
901 ft. **Site 1 of 2 in cluster D**

Relative:
Lower

Actual:
934 ft.

EDR Historical Auto Stations:

Name:	MR GAS TEXACO FOOD MARKET
Year:	2006
Address:	2670 ALCOA HWY
Name:	MR GAS MARKET
Year:	2010
Address:	2670 ALCOA HWY

D13 **MR. GAS MARKET #20** **UST** **U002099024**
ENE **2670 AIRPORT HIGHWAY** **HIST UST** **N/A**
1/8-1/4 **ALCOA, TN 37701**
0.171 mi.
901 ft. **Site 2 of 2 in cluster D**

Relative:
Lower

Actual:
934 ft.

UST:

Facility ID:	2050008
Facility Description:	Gas Station
Owner ID:	301225
Owner Name:	McNutt Oil Co., Inc.
Owner Address:	P.O. Box 4669
Owner Address 2:	Not reported
Owner City,St,Zip:	Maryville, TN 37802
Owner Description:	Local Government
Tank ID:	5
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	560
Substance Description:	Gasoline
Date Installed:	04/26/1963
Date Last Used:	12/22/1988
Date Closed:	12/22/1988
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Galvanized Steel
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported

MR. GAS MARKET #20 (Continued) **U002099024**

Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	2
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	3000
Substance Description:	Gasoline
Date Installed:	04/25/1950
Date Last Used:	03/31/1991
Date Closed:	07/18/1991
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	True
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Galvanized Steel
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	True
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

MR. GAS MARKET #20 (Continued) **U002099024**

Tank ID:	3
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	3000
Substance Description:	Gasoline
Date Installed:	04/25/1950
Date Last Used:	03/31/1991
Date Closed:	07/18/1991
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	True
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Galvanized Steel
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	True
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	4
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	4000
Substance Description:	Gasoline
Date Installed:	04/25/1950
Date Last Used:	03/31/1991

MR. GAS MARKET #20 (Continued) **U002099024**

Date Closed:	07/18/1991
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	True
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Galvanized Steel
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	True
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	1
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	6000
Substance Description:	Gasoline
Date Installed:	04/25/1970
Date Last Used:	03/31/1991
Date Closed:	07/18/1991
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported

MR. GAS MARKET #20 (Continued) **U002099024**

Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Galvanized Steel
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	True
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	7
Tank Status:	**Currently In Use**
Compartment Capacity:	8000
Substance Description:	Gasoline
Date Installed:	03/02/1992
Date Last Used:	Not reported
Date Closed:	Not reported
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Composite (Steel w/FRP)
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	True
Tank Vapor Monitor:	False
Tank GW Monitor:	False

MR. GAS MARKET #20 (Continued) **U002099024**

Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Fiberglass Reinforced Plastic
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	True
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Ball Float Valves
Overfill Installed:	True
Spill Installed:	True
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	6
Tank Status:	**Currently In Use**
Compartment Capacity:	12000
Substance Description:	Gasoline
Date Installed:	03/02/1992
Date Last Used:	Not reported
Date Closed:	Not reported
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Composite (Steel w/FRP)
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	True
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False

MR. GAS MARKET #20 (Continued) **U002099024**

Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Fiberglass Reinforced Plastic
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	True
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Ball Float Valves
Overfill Installed:	True
Spill Installed:	True
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

HIST UST:

Facility ID:	2-050008
Facility Description:	Gas Station
Owner ID:	6210
Owner Name:	MCNUTT OIL CO., INC.
Owner Address:	P.O. Box 4669
Owner City,St,Zip:	Maryville, TN 37802
Owner Telephone:	(865) 983-4280
Owner Description:	Commercial
Tank ID:	4
Tank Status:	**Permanently Out of Use**
Tank Capacity:	4000
Tank Contents:	Gasoline
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	True
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	04/25/1950
Tank Leak Detection Listed:	False
Pipe Material:	Galvanized Steel

MR. GAS MARKET #20 (Continued) **U002099024**

Pipe Other Material:	None
Pipe Type:	Not Listed
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	True
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	False

Tank ID:	2
Tank Status:	**Permanently Out of Use**
Tank Capacity:	3000
Tank Contents:	Gasoline
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	True
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	04/25/1950
Tank Leak Detection Listed:	False
Pipe Material:	Galvanized Steel
Pipe Other Material:	None
Pipe Type:	Not Listed
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	True
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	False

Tank ID:	5
Tank Status:	**Permanently Out of Use**
Tank Capacity:	560
Tank Contents:	Gasoline
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False

MR. GAS MARKET #20 (Continued) **U002099024**

Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	04/26/1963
Tank Leak Detection Listed:	True
Pipe Material:	Galvanized Steel
Pipe Other Material:	None
Pipe Type:	Not Listed
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	6
Tank Status:	**Currently in Use**
Tank Capacity:	12000
Tank Contents:	Gasoline
Tank Material:	Composite (Steel w/ FRP)
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	True
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	True
Spill Installed:	True
Cathodic Protection:	True
Date Installed:	03/02/1992
Tank Leak Detection Listed:	False
Pipe Material:	Fiberglass Reinforced Plastic
Pipe Other Material:	Double-Walled
Pipe Type:	Pressurized
Pipe Auto Line Leak Detect.:	True
Pipe Leak Detection Listed:	True
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	False

Tank ID:	3
Tank Status:	**Permanently Out of Use**
Tank Capacity:	3000

MR. GAS MARKET #20 (Continued) **U002099024**

Tank Contents:	Gasoline
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	True
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	04/25/1950
Tank Leak Detection Listed:	False
Pipe Material:	Galvanized Steel
Pipe Other Material:	None
Pipe Type:	Not Listed
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	True
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	False

Tank ID:	7
Tank Status:	**Currently in Use**
Tank Capacity:	8000
Tank Contents:	Gasoline
Tank Material:	Composite (Steel w/ FRP)
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	True
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	True
Spill Installed:	True
Cathodic Protection:	True
Date Installed:	03/02/1992
Tank Leak Detection Listed:	False
Pipe Material:	Fiberglass Reinforced Plastic
Pipe Other Material:	Double-Walled
Pipe Type:	Pressurized
Pipe Auto Line Leak Detect.:	True
Pipe Leak Detection Listed:	True
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False

MR. GAS MARKET #20 (Continued) **U002099024**

Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	False

Tank ID:	1
Tank Status:	**Permanently Out of Use**
Tank Capacity:	6000
Tank Contents:	Gasoline
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	04/25/1970
Tank Leak Detection Listed:	True
Pipe Material:	Galvanized Steel
Pipe Other Material:	None
Pipe Type:	Not Listed
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	True
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	False

E14 **CHEROKEE AVIATION INC.** **LUST U004164196**
East **2285 ALCOA HIGHWAY** **UST N/A**
1/8-1/4 **ALCOA, TN 37701**
0.212 mi.
1119 ft. **Site 1 of 4 in cluster E**

Relative:
Lower

Actual:
947 ft.

LUST:

Region:	STATE
Region Number:	2
Facility Id:	2050036
Case Number:	4
Current Status:	1a Completed Tank Closure
Product Released:	Not reported
Discovery Date:	Not reported
How Discovered:	Not reported
Cause:	Not reported
Case Manager:	RAH
Case Description:	Not reported
Section:	FO
Priority:	Not reported

CHEROKEE AVIATION INC. (Continued) **U004164196**

Consultant ID:	Not reported
Consultant Name:	Not reported
Consultant Contact:	Not reported
Consultant Contact Title:	Not reported
Consultant Contact First Name:	Not reported
Consultant Contact Last Name:	Not reported
Consultant Contact Address2:	Not reported
Consultant City:	Not reported
Consultant State:	Not reported
Consultant Telephone:	Not reported
Owner ID:	1574
Owner Name:	Not reported
Owner Contact:	Not reported
Owner Contact Title:	Not reported
Owner Contact First Name:	Not reported
Owner Contact Last Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
Owner Zip Code:	Not reported
Owner Telephone:	Not reported

UST:

Facility ID:	2050036
Facility Description:	Not Listed
Owner ID:	301588
Owner Name:	Cherokee Aviation Inc.
Owner Address:	2285 AIRPORT HIGHWAY
Owner Address 2:	Not reported
Owner City,St,Zip:	ALCOA, TN 37701
Owner Description:	Private
Tank ID:	9
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	500
Substance Description:	Used Oil
Date Installed:	02/08/1971
Date Last Used:	12/18/1998
Date Closed:	10/21/1999
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False
Tank Emergen:	False

CHEROKEE AVIATION INC. (Continued) **U004164196**

Tank No Fee:	True
Pipe Mat Desc:	Bare Steel
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	6
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	1000
Substance Description:	Gasoline
Date Installed:	02/01/1971
Date Last Used:	12/18/1998
Date Closed:	09/01/1999
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Bare Steel
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported

CHEROKEE AVIATION INC. (Continued) **U004164196**

Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	10
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	1000
Substance Description:	Gasoline
Date Installed:	01/02/1900
Date Last Used:	12/01/1984
Date Closed:	09/01/1999
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Unknown
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Unknown
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False

CHEROKEE AVIATION INC. (Continued) **U004164196**

Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	7
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	1000
Substance Description:	Used Oil
Date Installed:	02/07/1971
Date Last Used:	12/18/1998
Date Closed:	10/21/1999
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Bare Steel
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported

CHEROKEE AVIATION INC. (Continued) **U004164196**

Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	8
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	2000
Substance Description:	Used Oil
Date Installed:	02/08/1971
Date Last Used:	12/18/1998
Date Closed:	09/21/1999
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Bare Steel
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

CHEROKEE AVIATION INC. (Continued) **U004164196**

Tank ID:	5
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	12000
Substance Description:	Gasoline
Date Installed:	02/07/1971
Date Last Used:	Not reported
Date Closed:	10/17/2005
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	Lined Interior
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	True
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Bare Steel
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Unknown
Overfill Installed:	True
Spill Installed:	True
CP Met:	True
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	4
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	12000
Substance Description:	Jet Fuel
Date Installed:	02/08/1971
Date Last Used:	Not reported

CHEROKEE AVIATION INC. (Continued) **U004164196**

Date Closed:	10/17/2005
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Cathodically Protected Steel-StiP3
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	True
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Bare Steel
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Unknown
Overfill Installed:	True
Spill Installed:	True
CP Met:	True
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	1
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	20000
Substance Description:	Jet Fuel
Date Installed:	02/08/1971
Date Last Used:	Not reported
Date Closed:	10/17/2005
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Cathodically Protected Steel-StiP3
Tank Mods Desc:	Lined Interior
Tank Other Material:	Not reported

CHEROKEE AVIATION INC. (Continued) **U004164196**

Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	True
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Bare Steel
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Unknown
Overfill Installed:	True
Spill Installed:	True
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	2
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	20000
Substance Description:	Jet Fuel
Date Installed:	02/08/1971
Date Last Used:	Not reported
Date Closed:	10/17/2005
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Cathodically Protected Steel-StiP3
Tank Mods Desc:	Lined Interior
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	True
Tank Vapor Monitor:	False
Tank GW Monitor:	False

CHEROKEE AVIATION INC. (Continued) **U004164196**

Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Bare Steel
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Unknown
Overfill Installed:	True
Spill Installed:	True
CP Met:	True
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	3
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	20000
Substance Description:	Jet Fuel
Date Installed:	02/08/1971
Date Last Used:	Not reported
Date Closed:	10/17/2005
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Cathodically Protected Steel-StiP3
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	True
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False

CHEROKEE AVIATION INC. (Continued) **U004164196**

Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Bare Steel
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Unknown
Overfill Installed:	True
Spill Installed:	True
CP Met:	True
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

E15 **CHEROKEE AVIATION INC.** **RCRA NonGen / NLR** **1000876087**
East **2285 AIRPORT HIGHWAY** **FINDS** **TN0000117200**
1/8-1/4 **ALCOA, TN 37701** **LUST**
0.212 mi. **LUST TRUST**
1119 ft. **Site 2 of 4 in cluster E** **HIST UST**

Relative:
Lower

Actual:
947 ft.

RCRA NonGen / NLR:

Date form received by agency:	03/05/2002
Facility name:	CHEROKEE AVIATION INC.
Facility address:	2285 AIRPORT HIGHWAY ALCOA, TN 37701
EPA ID:	TN0000117200
Mailing address:	AIRPORT HIGHWAY ALCOA, TN 37701
Contact:	DERRICK STRUNK
Contact address:	AIRPORT HIGHWAY ALCOA, TN 37701
Contact country:	US
Contact telephone:	(865) 970-9000
Contact email:	Not reported
EPA Region:	04
Land type:	Municipal
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	DERRICK STRUNK
Owner/operator address:	AIRPORT HIGHWAY ALCOA, TN 37701
Owner/operator country:	US
Owner/operator telephone:	(865) 970-9000

CHEROKEE AVIATION INC. (Continued) **1000876087**

Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 03/02/2002
Owner/Op end date: Not reported

Owner/operator name: CHEROKEE AVIATION INC.
Owner/operator address: AIRPORT HIGHWAY
ALCOA, TN 37701
Owner/operator country: US
Owner/operator telephone: (865) 970-9000
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 03/05/2002
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 03/09/2001
Facility name: CHEROKEE AVIATION INC.
Site name: CHEROKEE AVIATION INC
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 02/17/1999
Facility name: CHEROKEE AVIATION INC.
Site name: CHEROKEE AVIATION INC
Classification: Conditionally Exempt Small Quantity Generator

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D006
Waste name: CADMIUM

CHEROKEE AVIATION INC. (Continued) **1000876087**

Waste code: D008
Waste name: LEAD

Waste code: D018
Waste name: BENZENE

Waste code: D039
Waste name: TETRACHLOROETHYLENE

Facility Has Received Notices of Violations:
Regulation violated: FR - 279.22(c)(2)
Area of violation: Generators - General
Date violation determined: 03/04/1997
Date achieved compliance: 03/04/1997
Violation lead agency: EPA
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - .11(1)(a)1
Area of violation: Generators - General
Date violation determined: 03/04/1997
Date achieved compliance: 04/20/1997
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 03/13/1997
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 10/23/2001
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 10/21/1999
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 02/25/1998
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

CHEROKEE AVIATION INC. (Continued) **1000876087**

Evaluation date: 03/04/1997
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 03/04/1997
Evaluation lead agency: EPA-Initiated Oversight/Observation/Training Actions

Evaluation date: 03/04/1997
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 04/20/1997
Evaluation lead agency: State

FINDS:

Registry ID: 110004951990

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

LUST:
Region: STATE
Region Number: 2
Facility Id: 2050036
Case Number: 2
Current Status: 8 Case Closed
Product Released: Not reported
Discovery Date: 02/28/1999
How Discovered: 1 At Closure
Cause: 7 Unknown
Case Manager: DRH
Case Description: to DRH 12/2004 Tank Farm Site Used Oil & gas Tank
Section: FO
Priority: Low
Consultant ID: Not reported
Consultant Name: Not reported
Consultant Contact: Not reported
Consultant Contact Title: Not reported
Consultant Contact First Name: Not reported
Consultant Contact Last Name: Not reported
Consultant Contact Address2: Not reported
Consultant City: Not reported
Consultant State: Not reported
Consultant Telephone: Not reported
Owner ID: 1574
Owner Name: CHEROKEE AVIATION INC.
Owner Contact: Not reported
Owner Contact Title: Not reported
Owner Contact First Name: Not reported
Owner Contact Last Name: Not reported
Owner Address: 2285 AIRPORT HWY
Owner City: Alcoa

CHEROKEE AVIATION INC. (Continued) **1000876087**

Owner State:	TN
Owner Zip Code:	37701
Owner Telephone:	(423) 970-9000
Region:	STATE
Region Number:	2
Facility Id:	2050036
Case Number:	3
Current Status:	8 Case Closed
Product Released:	Not reported
Discovery Date:	04/02/2001
How Discovered:	8 Other
Cause:	7 Unknown
Case Manager:	DRH
Case Description:	Jet Fuel & Avgas release
Section:	FO
Priority:	Medium
Consultant ID:	Not reported
Consultant Name:	Not reported
Consultant Contact:	Not reported
Consultant Contact Title:	Not reported
Consultant Contact First Name:	Not reported
Consultant Contact Last Name:	Not reported
Consultant Contact Address2:	Not reported
Consultant City:	Not reported
Consultant State:	Not reported
Consultant Telephone:	Not reported
Owner ID:	1574
Owner Name:	CHEROKEE AVIATION INC.
Owner Contact:	Not reported
Owner Contact Title:	Not reported
Owner Contact First Name:	Not reported
Owner Contact Last Name:	Not reported
Owner Address:	2285 AIRPORT HWY
Owner City:	Alcoa
Owner State:	TN
Owner Zip Code:	37701
Owner Telephone:	(423) 970-9000
Region:	STATE
Region Number:	2
Facility Id:	2050036
Case Number:	1
Current Status:	8 Case Closed
Product Released:	Not reported
Discovery Date:	09/29/1999
How Discovered:	1 At Closure
Cause:	7 Unknown
Case Manager:	RA
Case Description:	Hanger Site
Section:	FO
Priority:	Not reported
Consultant ID:	Not reported
Consultant Name:	Not reported
Consultant Contact:	Not reported
Consultant Contact Title:	Not reported
Consultant Contact First Name:	Not reported

CHEROKEE AVIATION INC. (Continued) **1000876087**

Consultant Contact Last Name: Not reported
Consultant Contact Address2: Not reported
Consultant City: Not reported
Consultant State: Not reported
Consultant Telephone: Not reported
Owner ID: 1574
Owner Name: CHEROKEE AVIATION INC.
Owner Contact: Not reported
Owner Contact Title: Not reported
Owner Contact First Name: Not reported
Owner Contact Last Name: Not reported
Owner Address: 2285 AIRPORT HWY
Owner City: Alcoa
Owner State: TN
Owner Zip Code: 37701
Owner Telephone: (423) 970-9000

LUST TRUST:
Facility Id: 2050036
Case Number: 2
Application Num: 00093
Tank Owner: CHEROKEE AVIATION INC
Owner Id: 1574
Deductible: $8,540.76
Applied Requested: Not reported
Applied Not Eligible: Not reported
Applied Net Pay: Not reported
Applied Deductible: Not reported
Applied Payment: Not reported
Total Requested: $86,960.01
Total Not Eligible: $1,552.38
Total Paid: $76,866.87
Total Net Pay: $85,407.63
Case Status: **CLOSED**

Facility Id: 2050036
Case Number: 3
Application Num: 03082
Tank Owner: CHEROKEE AVIATION INC
Owner Id: 1574
Deductible: $10,087.50
Applied Requested: Not reported
Applied Not Eligible: Not reported
Applied Net Pay: Not reported
Applied Deductible: Not reported
Applied Payment: Not reported
Total Requested: $204,449.35
Total Not Eligible: $10,200.17
Total Paid: $184,249.18
Total Net Pay: $194,249.18
Case Status: **CLOSED**

HIST UST:
Facility ID: 2-050036
Facility Description: Not Listed
Owner ID: 1574

CHEROKEE AVIATION INC. (Continued) **1000876087**

Owner Name:	CHEROKEE AVIATION INC.
Owner Address:	2285 Airport Highway
Owner City,St,Zip:	Alcoa, TN 37701
Owner Telephone:	(423) 970-9000
Owner Description:	Private
Tank ID:	4
Tank Status:	**Currently in Use**
Tank Capacity:	12000
Tank Contents:	Jet Fuel
Tank Material:	Cathodically Protected Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	True
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	True
Spill Installed:	True
Cathodic Protection:	True
Date Installed:	02/08/1971
Tank Leak Detection Listed:	False
Pipe Material:	Bare Steel
Pipe Other Material:	Cathodically Protected
Pipe Type:	U.S. Suction
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	10
Tank Status:	**Permanently Out of Use**
Tank Capacity:	1000
Tank Contents:	Gasoline
Tank Material:	Unknown
Tank 2ndary Trait:	None
Tank Manual Gauge:	True
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False

CHEROKEE AVIATION INC. (Continued) **1000876087**

Date Installed:	/ /
Tank Leak Detection Listed:	False
Pipe Material:	Unknown
Pipe Other Material:	None
Pipe Type:	Not Listed
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	3
Tank Status:	**Currently in Use**
Tank Capacity:	20000
Tank Contents:	Jet Fuel
Tank Material:	Cathodically Protected Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	True
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	True
Spill Installed:	True
Cathodic Protection:	True
Date Installed:	02/08/1971
Tank Leak Detection Listed:	False
Pipe Material:	Bare Steel
Pipe Other Material:	Cathodically Protected
Pipe Type:	Pressurized
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	5
Tank Status:	**Currently in Use**
Tank Capacity:	12000
Tank Contents:	Gasoline
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	Lined Interior
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False

CHEROKEE AVIATION INC. (Continued) **1000876087**

Tank ATG:	True
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	True
Spill Installed:	True
Cathodic Protection:	True
Date Installed:	02/07/1971
Tank Leak Detection Listed:	False
Pipe Material:	Bare Steel
Pipe Other Material:	Cathodically Protected
Pipe Type:	Safe Suction
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	1
Tank Status:	**Currently in Use**
Tank Capacity:	20000
Tank Contents:	Jet Fuel
Tank Material:	Cathodically Protected Steel
Tank 2ndary Trait:	Lined Interior
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	True
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	True
Spill Installed:	True
Cathodic Protection:	False
Date Installed:	02/08/1971
Tank Leak Detection Listed:	False
Pipe Material:	Bare Steel
Pipe Other Material:	None
Pipe Type:	Safe Suction
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

CHEROKEE AVIATION INC. (Continued) **1000876087**

Tank ID:	9
Tank Status:	**Permanently Out of Use**
Tank Capacity:	500
Tank Contents:	Used Oil
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	True
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	02/08/1971
Tank Leak Detection Listed:	False
Pipe Material:	Bare Steel
Pipe Other Material:	None
Pipe Type:	Gravity Feed
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	2
Tank Status:	**Currently in Use**
Tank Capacity:	20000
Tank Contents:	Jet Fuel
Tank Material:	Cathodically Protected Steel
Tank 2ndary Trait:	Lined Interior
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	True
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	True
Spill Installed:	True
Cathodic Protection:	True
Date Installed:	02/08/1971
Tank Leak Detection Listed:	False
Pipe Material:	Bare Steel
Pipe Other Material:	Cathodically Protected
Pipe Type:	Safe Suction
Pipe Auto Line Leak Detect.:	False

CHEROKEE AVIATION INC. (Continued) **1000876087**

Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	6
Tank Status:	**Permanently Out of Use**
Tank Capacity:	1000
Tank Contents:	Gasoline
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	True
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	02/01/1971
Tank Leak Detection Listed:	False
Pipe Material:	Bare Steel
Pipe Other Material:	None
Pipe Type:	Safe Suction
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	8
Tank Status:	**Permanently Out of Use**
Tank Capacity:	2000
Tank Contents:	Used Oil
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	True
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False

CHEROKEE AVIATION INC. (Continued) **1000876087**

Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	02/08/1971
Tank Leak Detection Listed:	False
Pipe Material:	Bare Steel
Pipe Other Material:	None
Pipe Type:	Gravity Feed
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	7
Tank Status:	**Permanently Out of Use**
Tank Capacity:	1000
Tank Contents:	Used Oil
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	True
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	02/07/1971
Tank Leak Detection Listed:	False
Pipe Material:	Bare Steel
Pipe Other Material:	None
Pipe Type:	Gravity Feed
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

16 ENE 1/8-1/4 0.229 mi. 1207 ft.

DAVIS PRINTING CO
202 CUSICK AVENUE
MARYVILLE, TN

RCRA NonGen / NLR
FINDS

1000917400
TND066711664

Relative: Lower

Actual: 930 ft.

RCRA NonGen / NLR:

Date form received by agency:	11/19/1980
Facility name:	DAVIS PRINTING CO
Facility address:	202 CUSICK AVENUE MARYVILLE, TN 37801
EPA ID:	TND066711664
Mailing address:	PO BOX 444 MARYVILLE, TN 37801
Contact:	DAVIS PRINTING
Contact address:	202 CUSICK AVENUE MARYVILLE, TN 37801
Contact country:	US
Contact telephone:	(615) 555-1212
Contact email:	Not reported
EPA Region:	04
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

Evaluation Action Summary:

Evaluation date:	07/26/1984
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State

FINDS:

Registry ID: 110004972879

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport,

DAVIS PRINTING CO (Continued) **1000917400**

and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

E17 **GLOBAL MOTORS** **HIST UST** **U003609971**
East **2284 ALCOA HIGHWAY** **N/A**
1/8-1/4 **MARYVILLE, TN 37801**
0.229 mi.
1209 ft. **Site 3 of 4 in cluster E**

Relative:
Lower

Actual:
951 ft.

HIST UST:

Facility ID:	2-050084
Facility Description:	Not Listed
Owner ID:	1232
Owner Name:	Calloway Oil Company
Owner Address:	P.O. Box 6618
Owner City,St,Zip:	Maryville, TN 37802
Owner Telephone:	(865) 982-3266
Owner Description:	Commercial
Tank ID:	1
Tank Status:	**Permanently Out of Use**
Tank Capacity:	12000
Tank Contents:	Gasoline
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	12/19/1972
Tank Leak Detection Listed:	True
Pipe Material:	Galvanized Steel
Pipe Other Material:	None
Pipe Type:	Not Listed
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

E18 **GLOBAL MOTORS** **UST** **U004164220**
East **2284 ALCOA HIGHWAY** **N/A**
1/8-1/4 **MARYVILLE, TN 37801**
0.229 mi.
1209 ft. **Site 4 of 4 in cluster E**

Relative:
Lower

Actual:
951 ft.

UST:

Facility ID:	2050084
Facility Description:	Not Listed
Owner ID:	300766
Owner Name:	Calloway Oil Company
Owner Address:	P.O. Box 6618
Owner Address 2:	Not reported
Owner City,St,Zip:	Maryville, TN 37802
Owner Description:	Commercial
Tank ID:	1
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	12000
Substance Description:	Gasoline
Date Installed:	12/19/1972
Date Last Used:	12/18/1988
Date Closed:	Not reported
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Galvanized Steel
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported

GLOBAL MOTORS (Continued) **U004164220**

Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

F19 **KNOX-AIR INC.** **HIST UST** **U001907259**
ESE **2221 AIRPORT HIGHWAY** **N/A**
1/8-1/4 **ALCOA, TN 37701**
0.245 mi.
1292 ft. **Site 1 of 3 in cluster F**

Relative:
Lower

Actual:
959 ft.

HIST UST:

Facility ID:	2-050112
Facility Description:	Air Taxi (Airline)
Owner ID:	5562
Owner Name:	KNOX-AIR INC.
Owner Address:	2221 Airport Highway
Owner City,St,Zip:	Alcoa, TN 37701
Owner Telephone:	(423) 970-3121
Owner Description:	Private
Tank ID:	2
Tank Status:	**Currently in Use**
Tank Capacity:	30000
Tank Contents:	Kerosene
Tank Material:	Cathodically Protected Steel
Tank 2ndary Trait:	Lined Interior
Tank Manual Gauge:	False
Tank Tightness:	True
Tank Inventory Control:	True
Tank ATG:	True
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	True
Spill Installed:	True
Cathodic Protection:	True
Date Installed:	03/13/1971
Tank Leak Detection Listed:	False
Pipe Material:	Bare Steel
Pipe Other Material:	Cathodically Protected
Pipe Type:	Safe Suction
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True
Tank ID:	3
Tank Status:	**Currently in Use**

KNOX-AIR INC. (Continued) **U001907259**

Tank Capacity:	30000
Tank Contents:	Kerosene
Tank Material:	Cathodically Protected Steel
Tank 2ndary Trait:	Lined Interior
Tank Manual Gauge:	False
Tank Tightness:	True
Tank Inventory Control:	True
Tank ATG:	True
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	True
Spill Installed:	True
Cathodic Protection:	True
Date Installed:	03/13/1971
Tank Leak Detection Listed:	False
Pipe Material:	Bare Steel
Pipe Other Material:	Cathodically Protected
Pipe Type:	Safe Suction
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	False

Tank ID:	6
Tank Status:	**Permanently Out of Use**
Tank Capacity:	500
Tank Contents:	Gasoline
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	True
Tank ATG:	True
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	03/13/1971
Tank Leak Detection Listed:	False
Pipe Material:	Bare Steel
Pipe Other Material:	None
Pipe Type:	Safe Suction
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False

KNOX-AIR INC. (Continued) **U001907259**

Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	1
Tank Status:	**Currently in Use**
Tank Capacity:	30000
Tank Contents:	Kerosene
Tank Material:	Cathodically Protected Steel
Tank 2ndary Trait:	Lined Interior
Tank Manual Gauge:	False
Tank Tightness:	True
Tank Inventory Control:	True
Tank ATG:	True
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	True
Spill Installed:	True
Cathodic Protection:	True
Date Installed:	03/13/1971
Tank Leak Detection Listed:	False
Pipe Material:	Bare Steel
Pipe Other Material:	Cathodically Protected
Pipe Type:	Safe Suction
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	False

Tank ID:	12
Tank Status:	**Permanently Out of Use**
Tank Capacity:	1000
Tank Contents:	Gasoline
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	True
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False

KNOX-AIR INC. (Continued) **U001907259**

Cathodic Protection:	False
Date Installed:	03/13/1971
Tank Leak Detection Listed:	False
Pipe Material:	Bare Steel
Pipe Other Material:	None
Pipe Type:	Safe Suction
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	9
Tank Status:	**Currently in Use**
Tank Capacity:	30000
Tank Contents:	Kerosene
Tank Material:	Cathodically Protected Steel
Tank 2ndary Trait:	Lined Interior
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	True
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	True
Spill Installed:	True
Cathodic Protection:	True
Date Installed:	03/13/1971
Tank Leak Detection Listed:	False
Pipe Material:	Bare Steel
Pipe Other Material:	Cathodically Protected
Pipe Type:	Safe Suction
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	7
Tank Status:	**Permanently Out of Use**
Tank Capacity:	500
Tank Contents:	Kerosene
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False

KNOX-AIR INC. (Continued) **U001907259**

Tank Inventory Control:	True
Tank ATG:	True
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	03/13/1971
Tank Leak Detection Listed:	False
Pipe Material:	Fiberglass Reinforced Plastic
Pipe Other Material:	None
Pipe Type:	Gravity Feed
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	5
Tank Status:	**Currently in Use**
Tank Capacity:	15000
Tank Contents:	Diesel
Tank Material:	Cathodically Protected Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	True
Tank Inventory Control:	True
Tank ATG:	True
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	True
Spill Installed:	True
Cathodic Protection:	True
Date Installed:	03/13/1971
Tank Leak Detection Listed:	False
Pipe Material:	Bare Steel
Pipe Other Material:	Cathodically Protected
Pipe Type:	Safe Suction
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

KNOX-AIR INC. (Continued) **U001907259**

Tank ID:	11
Tank Status:	**Permanently Out of Use**
Tank Capacity:	1000
Tank Contents:	Not Listed
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	True
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	03/13/1971
Tank Leak Detection Listed:	False
Pipe Material:	Bare Steel
Pipe Other Material:	None
Pipe Type:	Safe Suction
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	4
Tank Status:	**Currently in Use**
Tank Capacity:	15000
Tank Contents:	Gasoline
Tank Material:	Cathodically Protected Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	True
Tank Inventory Control:	True
Tank ATG:	True
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	True
Spill Installed:	True
Cathodic Protection:	False
Date Installed:	03/13/1971
Tank Leak Detection Listed:	False
Pipe Material:	Bare Steel
Pipe Other Material:	None
Pipe Type:	Safe Suction
Pipe Auto Line Leak Detect.:	False

KNOX-AIR INC. (Continued) **U001907259**

Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	8
Tank Status:	**Currently in Use**
Tank Capacity:	30000
Tank Contents:	Kerosene
Tank Material:	Cathodically Protected Steel
Tank 2ndary Trait:	Lined Interior
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	True
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	True
Spill Installed:	True
Cathodic Protection:	True
Date Installed:	03/13/1971
Tank Leak Detection Listed:	False
Pipe Material:	Bare Steel
Pipe Other Material:	Cathodically Protected
Pipe Type:	Safe Suction
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	10
Tank Status:	**Permanently Out of Use**
Tank Capacity:	5000
Tank Contents:	Other
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	True
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False

KNOX-AIR INC. (Continued) **U001907259**

Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	03/13/1971
Tank Leak Detection Listed:	False
Pipe Material:	Bare Steel
Pipe Other Material:	None
Pipe Type:	Safe Suction
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

F20 **KNOX-AIR INC.** **LUST** **S109837217**
ESE **2221 AIRPORT HWY** **LUST TRUST** **N/A**
1/8-1/4 **ALCOA, TN 37701** **AIRS**
0.245 mi.
1292 ft. **Site 2 of 3 in cluster F**

Relative:
Lower

Actual:
959 ft.

LUST:

Region:	STATE
Region Number:	2
Facility Id:	2050112
Case Number:	1
Current Status:	8 Case Closed
Product Released:	Not reported
Discovery Date:	07/02/1997
How Discovered:	1 At Closure
Cause:	7 Unknown
Case Manager:	EWC
Case Description:	Not reported
Section:	FO
Priority:	Not reported
Consultant ID:	Not reported
Consultant Name:	Not reported
Consultant Contact:	Not reported
Consultant Contact Title:	Not reported
Consultant Contact First Name:	Not reported
Consultant Contact Last Name:	Not reported
Consultant Contact Address2:	Not reported
Consultant City:	Not reported
Consultant State:	Not reported
Consultant Telephone:	Not reported
Owner ID:	5562
Owner Name:	KNOX-AIR INC.
Owner Contact:	Not reported
Owner Contact Title:	Not reported
Owner Contact First Name:	Not reported
Owner Contact Last Name:	Not reported
Owner Address:	2221 AIRPORT HWY
Owner City:	ALCOA
Owner State:	TN
Owner Zip Code:	37701
Owner Telephone:	(615) 970-3121

KNOX-AIR INC. (Continued) **S109837217**

LUST TRUST:

Facility Id:	2050112
Case Number:	1
Application Num:	98171
Tank Owner:	KNOX AIR INC
Owner Id:	5562
Deductible:	$2,621.66
Applied Requested:	Not reported
Applied Not Eligible:	Not reported
Applied Net Pay:	Not reported
Applied Deductible:	Not reported
Applied Payment:	Not reported
Total Requested:	$26,324.07
Total Not Eligible:	$107.50
Total Paid:	$23,594.91
Total Net Pay:	$26,216.57
Case Status:	**CLOSED**

AIRS:

Facility Id:	05-0168
Category:	TM
Contact Name:	Mr. Jim Sexton
Contact Address:	McGhee Tyson Airport, Fuel Farm Road
Contact City:	Alcoa
Contact State:	TN
Contact Zip:	37701
Contact Phone:	865 970-3121
Contact EMail:	-
Contact Function1:	Responsible Official
Contact Function2:	-
Contact Function3:	-
SIC Code:	4789
Description:	Transportation Services, NEC

Facility Id:	05-0168
Category:	TM
Contact Name:	Mr. James R. Sexton
Contact Address:	2361 Airport Highway
Contact City:	Alcoa
Contact State:	TN
Contact Zip:	37701
Contact Phone:	865 970-3122
Contact EMail:	-
Contact Function1:	-
Contact Function2:	-
Contact Function3:	Billing Person
SIC Code:	4789
Description:	Transportation Services, NEC

21 North 1/8-1/4 0.248 mi. 1312 ft.

UNITED PARCEL SERVICE
2085 AIRBASE ROAD
LOUISVILLE, TN 37777

RCRA-CESQG

1004781786
TN0000935635

Relative: Higher

Actual: 997 ft.

RCRA-CESQG:

Date form received by agency:	04/30/2013
Facility name:	UNITED PARCEL SERVICE
Facility address:	2085 AIRBASE ROAD LOUISVILLE, TN 37777
EPA ID:	TN0000935635
Mailing address:	CALLAHAN DRIVE KNOXVILLE, TN 37912
Contact:	SCOTT LANGFORD
Contact address:	CALLAHAN KNOXVILLE, TN 37912
Contact country:	US
Contact telephone:	865-219-6524
Contact email:	BWITHROW@UPS.COM
EPA Region:	04
Land type:	Private
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	UNITED PARCEL SERVICE
Owner/operator address:	AIRBASE ROAD LOUISVILLE, TN 37777
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/1993
Owner/Op end date:	Not reported

Owner/operator name:	SCOTT LANGFORD
Owner/operator address:	CALLAHAN DRIVE KNOXVILLE, TN 37912
Owner/operator country:	US
Owner/operator telephone:	(865) 219-6524
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	03/03/2013
Owner/Op end date:	Not reported

UNITED PARCEL SERVICE (Continued) **1004781786**

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/20/2012
Facility name: UNITED PARCEL SERVICE
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 03/03/2010
Facility name: UNITED PARCEL SERVICE
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 03/03/2008
Facility name: UNITED PARCEL SERVICE
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 02/27/2003
Facility name: UNITED PARCEL SERVICE
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 03/02/1999
Facility name: UNITED PARCEL SERVICE
Classification: Conditionally Exempt Small Quantity Generator

Hazardous Waste Summary:
Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 09/19/2006
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported

UNITED PARCEL SERVICE (Continued) **1004781786**

Evaluation lead agency: State

22
ENE
1/8-1/4
0.250 mi.
1319 ft.

217 AIRPORT PLAZA BLVD
ALCOA, TN 37701

EDR US Hist Auto Stat **1015329187**
N/A

Relative:
Lower

Actual:
914 ft.

EDR Historical Auto Stations:

Name:	AUTOPLUS
Year:	1999
Address:	217 AIRPORT PLAZA BLVD
Name:	AUTOPLUS
Year:	2000
Address:	217 AIRPORT PLAZA BLVD

23
WNW
1/4-1/2
0.252 mi.
1330 ft.

TENNESSEE AIR NATIONAL GUARD
420 POST RD
LOUISVILLE, TN 37777

LUST **S107459648**
N/A

Relative:
Higher

Actual:
990 ft.

LUST:

Region:	STATE
Region Number:	2
Facility Id:	0050285
Case Number:	1
Current Status:	8 Case Closed
Product Released:	Not reported
Discovery Date:	04/25/1991
How Discovered:	6 Tightness Testing
Cause:	5 Pipe Failure
Case Manager:	EWC
Case Description:	POL Fuel Pipeline (Site 12 (2) Diesel 3,000 gal
Section:	FO
Priority:	Not reported
Consultant ID:	Not reported
Consultant Name:	Not reported
Consultant Contact:	Not reported
Consultant Contact Title:	Not reported
Consultant Contact First Name:	Not reported
Consultant Contact Last Name:	Not reported
Consultant Contact Address2:	Not reported
Consultant City:	Not reported
Consultant State:	Not reported
Consultant Telephone:	Not reported
Owner ID:	14527
Owner Name:	MCGHEE TYSON AIRPORT
Owner Contact:	Not reported
Owner Contact Title:	Not reported
Owner Contact First Name:	Not reported
Owner Contact Last Name:	Not reported
Owner Address:	ATTN: DAVID JONESP. O. BOX 156
Owner City:	Knoxville
Owner State:	TN
Owner Zip Code:	37901

TENNESSEE AIR NATIONAL GUARD (Continued) **S107459648**

Owner Telephone:	(423) 970-2773
Region:	STATE
Region Number:	2
Facility Id:	0050285
Case Number:	2
Current Status:	8 Case Closed
Product Released:	Not reported
Discovery Date:	02/06/1992
How Discovered:	6 Tightness Testing
Cause:	7 Unknown
Case Manager:	EWC
Case Description:	134ARG/DE Site 13A
Section:	FO
Priority:	Not reported
Consultant ID:	Not reported
Consultant Name:	Not reported
Consultant Contact:	Not reported
Consultant Contact Title:	Not reported
Consultant Contact First Name:	Not reported
Consultant Contact Last Name:	Not reported
Consultant Contact Address2:	Not reported
Consultant City:	Not reported
Consultant State:	Not reported
Consultant Telephone:	Not reported
Owner ID:	14527
Owner Name:	MCGHEE TYSON AIRPORT
Owner Contact:	Not reported
Owner Contact Title:	Not reported
Owner Contact First Name:	Not reported
Owner Contact Last Name:	Not reported
Owner Address:	ATTN: DAVID JONESP. O. BOX 156
Owner City:	Knoxville
Owner State:	TN
Owner Zip Code:	37901
Owner Telephone:	(423) 970-2773

24
NW
1/4-1/2
0.254 mi.
1341 ft.

MCGHEE TYSON AIR NATIONAL GUARD BASE **CERCLIS 1015731928**
320 POST AVENUE **RCRA-LQG TN4570024196**
LOUISVILLE, TN 37777

Relative:
Lower

Actual:
956 ft.

CERCLIS:

Site ID:	0404160
EPA ID:	TN4570024196
Facility County:	BLOUNT
Short Name:	USAF MCGHEE TYSON ANG BAS
Congressional District:	02
IFMS ID:	Not reported
SMSA Number:	3840
USGC Hydro Unit:	06010201
Federal Facility:	Federal Facility
DMNSN Number:	2.00000
Site Orphan Flag:	N
RCRA ID:	Not reported
USGS Quadrangle:	Not reported
Site Init By Prog:	Not reported

MCGHEE TYSON AIR NATIONAL GUARD BASE (Continued) **1015731928**

NFRAP Flag: Not reported
Parent ID: Not reported
RST Code: Not reported
EPA Region: 04
Classification: Not reported
Site Settings Code: Not reported
NPL Status: Not on the NPL
DMNSN Unit Code: ACRE
RBRAC Code: Not reported
RResp Fed Agency Code: USAF
Non NPL Status: Other Cleanup Activity: State-Lead Cleanup
Non NPL Status Date: 04/17/86
Site Fips Code: 47009
CC Concurrence Date: / /
CC Concurrence FY: Not reported
Alias EPA ID: Not reported
Site FUDS Flag: Not reported

CERCLIS Site Contact Name(s):
Contact ID: 4000275.00000
Contact Name: Not reported
Contact Tel: Not reported
Contact Title: Site Assessment Manager (SAM)
Contact Email: Not reported

Contact ID: 13002428.00000
Contact Name: Not reported
Contact Tel: Not reported
Contact Title: Site Assessment Manager (SAM)
Contact Email: Not reported

Contact ID: 4272870.00000
Contact Name: Not reported
Contact Tel: Not reported
Contact Title: Site Assessment Manager (SAM)
Contact Email: Not reported

CERCLIS Site Alias Name(s):
Alias ID: 101
Alias Name: USAF MCGHEE TYSON ANG BASE
Alias Address: Not reported
BLOUNT, TN
Alias ID: 4270120
Alias Name: MCGHEE TYSON AIR NATIONAL GUARD BASE
Alias Address: MCGHEE TYSON AIRPORT
KNOXVILLE, TN 36605
Alias Comments: Not reported
Site Description: Not reported

CERCLIS Assessment History:

Action Code: 001
Action: DISCOVERY
Date Started: / /
Date Completed: 08/01/80
Priority Level: Not reported
Operable Unit: SITEWIDE

MCGHEE TYSON AIR NATIONAL GUARD BASE (Continued) **1015731928**

Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

Action Code: 001
Action: PRELIMINARY ASSESSMENT
Date Started: / /
Date Completed: 04/17/86
Priority Level: Low priority for further assessment
Operable Unit: SITEWIDE
Primary Responsibility: Federal Facilities
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

RCRA-LQG:
Date form received by agency: 02/13/2012
Facility name: MCGHEE TYSON AIR NATIONAL GUARD BASE
Facility address: 320 POST AVENUE
LOUISVILLE, TN 37777
EPA ID: TN4570024196
Mailing address: 134 ARW/SGPB
320 POST AVENUE
MCGHEE TYSON ANG, TN 377776206
Contact: CAPT. JACK M. CARLEY
Contact address: 134 ARW/SGPB 320 POST AVENUE
MCGHEE TYSON ANG, TN 377776206
Contact country: US
Contact telephone: (865) 985-4256
Contact email: Not reported
EPA Region: 04
Land type: Federal
Classification: Large Quantity Generator
Description: Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:
Owner/operator name: TENNESEE AIR NATIONAL GUARD
Owner/operator address: 134 BRISCOE DRIVE
LOUISVILLE, TN 37777
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Municipal

MCGHEE TYSON AIR NATIONAL GUARD BASE (Continued) **1015731928**

Owner/Operator Type: Owner
Owner/Op start date: 12/15/1957
Owner/Op end date: Not reported

Owner/operator name: TENNESEE AIR NATIONAL GUARD
Owner/operator address: 134 BRISCOE DRIVE
LOUISVILLE, TN 37777
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Municipal
Owner/Operator Type: Operator
Owner/Op start date: 12/15/1957
Owner/Op end date: Not reported

Owner/operator name: TENNESEE AIR NATIONAL GUARD
Owner/operator address: 134 BRISCOE DRIVE
MCGHEE TYSON AIR NAT. GUA, TN 37777
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/1950
Owner/Op end date: Not reported

Owner/operator name: TENNESEE AIR NATIONAL GUARD
Owner/operator address: 134 BRISCOE DRIVE
MCGHEE TYSON AIR NAT. GUA, TN 37777
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 01/01/1950
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Universal Waste Summary:
Waste type: Batteries
Accumulated waste on-site: Yes
Generated waste on-site: Not reported

MCGHEE TYSON AIR NATIONAL GUARD BASE (Continued) **1015731928**

Waste type: Batteries
Accumulated waste on-site: Yes
Generated waste on-site: Yes

Waste type: Lamps
Accumulated waste on-site: Yes
Generated waste on-site: Yes

Historical Generators:

Date form received by agency: 03/01/2011
Facility name: MCGHEE TYSON AIR NATIONAL GUARD BASE
Classification: Large Quantity Generator

Date form received by agency: 02/11/2011
Facility name: MCGHEE TYSON AIR NATIONAL GUARD BASE
Classification: Large Quantity Generator

Date form received by agency: 02/18/2010
Facility name: MCGHEE TYSON AIR NATIONAL GUARD BASE
Classification: Large Quantity Generator

Date form received by agency: 01/01/2010
Facility name: MCGHEE TYSON AIR NATIONAL GUARD BASE
Classification: Large Quantity Generator

Date form received by agency: 02/17/2009
Facility name: MCGHEE TYSON AIR NATIONAL GUARD BASE
Classification: Large Quantity Generator

Date form received by agency: 02/19/2008
Facility name: MCGHEE TYSON AIR NATIONAL GUARD BASE
Classification: Large Quantity Generator

Date form received by agency: 02/02/2008
Facility name: MCGHEE TYSON AIR NATIONAL GUARD BASE
Classification: Large Quantity Generator

Date form received by agency: 02/10/2006
Facility name: MCGHEE TYSON AIR NATIONAL GUARD BASE
Classification: Large Quantity Generator

Date form received by agency: 02/17/2004
Facility name: MCGHEE TYSON AIR NATIONAL GUARD BASE
Classification: Large Quantity Generator

Date form received by agency: 02/07/2003
Facility name: MCGHEE TYSON AIR NATIONAL GUARD BASE
Classification: Large Quantity Generator

Date form received by agency: 02/12/2002
Facility name: MCGHEE TYSON AIR NATIONAL GUARD BASE
Classification: Large Quantity Generator

Date form received by agency: 03/03/2000
Facility name: MCGHEE TYSON AIR NATIONAL GUARD BASE
Classification: Large Quantity Generator

MCGHEE TYSON AIR NATIONAL GUARD BASE (Continued) **1015731928**

Date form received by agency: 03/01/1999
Facility name: MCGHEE TYSON AIR NATIONAL GUARD BASE
Classification: Large Quantity Generator

Date form received by agency: 03/01/1997
Facility name: MCGHEE TYSON AIR NATIONAL GUARD BASE
Classification: Large Quantity Generator

Date form received by agency: 03/01/1995
Facility name: MCGHEE TYSON AIR NATIONAL GUARD BASE
Classification: Large Quantity Generator

Date form received by agency: 03/01/1994
Facility name: MCGHEE TYSON AIR NATIONAL GUARD BASE
Classification: Large Quantity Generator

Hazardous Waste Summary:

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D003
Waste name: A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.

Waste code: D005
Waste name: BARIUM

Waste code: D006
Waste name: CADMIUM

Waste code: D007
Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

Waste code: D010
Waste name: SELENIUM

MCGHEE TYSON AIR NATIONAL GUARD BASE (Continued) **1015731928**

Waste code: D018
Waste name: BENZENE

Waste code: D035
Waste name: METHYL ETHYL KETONE

Waste code: F001
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F002
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Biennial Reports:

Last Biennial Reporting Year: 2013

Annual Waste Handled:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET,

MCGHEE TYSON AIR NATIONAL GUARD BASE (Continued) **1015731928**

WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Amount (Lbs): 3505.7

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
Amount (Lbs): 187.1

Waste code: D003
Waste name: A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.
Amount (Lbs): 2

Waste code: D005
Waste name: BARIUM
Amount (Lbs): 1044.8

Waste code: D006
Waste name: CADMIUM
Amount (Lbs): 523.9

Waste code: D007
Waste name: CHROMIUM
Amount (Lbs): 105.8

Waste code: D009
Waste name: MERCURY
Amount (Lbs): 1

Waste code: P015
Waste name: BERYLLIUM
Amount (Lbs): 1

Waste code: U041
Waste name: EPICHLOROHYDRIN
Amount (Lbs): 1

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 05/17/2012
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

MCGHEE TYSON AIR NATIONAL GUARD BASE (Continued) **1015731928**

Evaluation date: 08/12/2010
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 06/05/2008
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 03/06/2006
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 05/20/2004
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 05/31/2001
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 02/24/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 02/24/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 02/24/1993
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 09/24/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 01/08/1986
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported

MCGHEE TYSON AIR NATIONAL GUARD BASE (Continued) **1015731928**

Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 03/12/1985
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

F25 **BUDGET RENTAL-A-CAR** **LUST** **U002012347**
ESE **2212 AIRPORT HWY** **HIST UST** **N/A**
1/4-1/2 **ALCOA, TN 37701**
0.269 mi.
1420 ft. **Site 3 of 3 in cluster F**

Relative:
Lower

Actual:
960 ft.

LUST:

Region:	STATE
Region Number:	2
Facility Id:	2050213
Case Number:	1
Current Status:	1a Completed Tank Closure
Product Released:	Not reported
Discovery Date:	Not reported
How Discovered:	Not reported
Cause:	Not reported
Case Manager:	EWC
Case Description:	Not reported
Section:	FO
Priority:	Not reported
Consultant ID:	Not reported
Consultant Name:	Not reported
Consultant Contact:	Not reported
Consultant Contact Title:	Not reported
Consultant Contact First Name:	Not reported
Consultant Contact Last Name:	Not reported
Consultant Contact Address2:	Not reported
Consultant City:	Not reported
Consultant State:	Not reported
Consultant Telephone:	Not reported
Owner ID:	9690
Owner Name:	VANN CAR INC.
Owner Contact:	Not reported
Owner Contact Title:	Not reported
Owner Contact First Name:	Not reported
Owner Contact Last Name:	Not reported
Owner Address:	2212 AIRPORT HWY
Owner City:	ALCOA
Owner State:	TN
Owner Zip Code:	37701
Owner Telephone:	(615) 970-4141

Region:	STATE
Region Number:	2
Facility Id:	2050213
Case Number:	2
Current Status:	8 Case Closed
Product Released:	Not reported
Discovery Date:	11/14/2002
How Discovered:	2 Release Detection

BUDGET RENT-A-CAR (Continued) **U002012347**

Cause:	7 Unknown
Case Manager:	EWC
Case Description:	Monthly monitoring results sensor was not normal
Section:	FO
Priority:	Not reported
Consultant ID:	Not reported
Consultant Name:	Not reported
Consultant Contact:	Not reported
Consultant Contact Title:	Not reported
Consultant Contact First Name:	Not reported
Consultant Contact Last Name:	Not reported
Consultant Contact Address2:	Not reported
Consultant City:	Not reported
Consultant State:	Not reported
Consultant Telephone:	Not reported
Owner ID:	1077
Owner Name:	BUDGET RENT A CAR SYSTEMS INC
Owner Contact:	Not reported
Owner Contact Title:	Not reported
Owner Contact First Name:	Not reported
Owner Contact Last Name:	Not reported
Owner Address:	P O BOX 141188
Owner City:	Austin
Owner State:	TX
Owner Zip Code:	78714
Owner Telephone:	(512) 380-7130

HIST UST:

Facility ID:	2-050213
Facility Description:	Other
Owner ID:	158302
Owner Name:	Budget Rent A Car System, Inc.
Owner Address:	Attn: Michael Feeley 6 Sylvan Way Dept 29-093-36
Owner City,St,Zip:	Parsippany, NJ 07054
Owner Telephone:	(973) 496-3467
Owner Description:	Private
Tank ID:	2
Tank Status:	**Permanently Out of Use**
Tank Capacity:	3000
Tank Contents:	Gasoline
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	02/19/1966
Tank Leak Detection Listed:	True

BUDGET RENT-A-CAR (Continued) **U002012347**

Pipe Material:	Unknown
Pipe Other Material:	None
Pipe Type:	Not Listed
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	1
Tank Status:	**Permanently Out of Use**
Tank Capacity:	6000
Tank Contents:	Gasoline
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	02/19/1982
Tank Leak Detection Listed:	True
Pipe Material:	Bare Steel
Pipe Other Material:	None
Pipe Type:	Pressurized
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	3
Tank Status:	**Currently In Use**
Tank Capacity:	12000
Tank Contents:	Gasoline
Tank Material:	Fiberglass Reinforced Plastic
Tank 2ndary Trait:	Double-Walled
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False

BUDGET RENT-A-CAR (Continued) **U002012347**

Tank Groundwater Monitor:	False
Tank Double Walled:	True
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	True
Spill Installed:	True
Cathodic Protection:	True
Date Installed:	10/08/1996
Tank Leak Detection Listed:	False
Pipe Material:	Flexible Plastic
Pipe Other Material:	Double-Walled
Pipe Type:	Pressurized
Pipe Auto Line Leak Detect.:	True
Pipe Leak Detection Listed:	True
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	False

G26 **SWRCY** **S108321469**
ENE **2300 N WRIGHT ROAD** **SPILLS** **N/A**
1/4-1/2 **ALCOA, TN**
0.285 mi.
1505 ft. **Site 1 of 2 in cluster G**

Relative:
Lower

Actual:
910 ft.

SWRCY:

Contact Name:	Mike Infante
Mailing Address:	2300 N Wright Road, Alcoa, TN 37701
Contact Phone:	(865) 977-2011 Fax: (865) 977-3882
Counties Service:	All of Tennessee,
Business Type:	End User, Aluminum Manufacturer
Operation Radius:	Worldwide
Provides Transportation:	yes
Comments:	Not reported
Registered Materials:	Other Metals (Aluminum),

SPILLS:

State Incident Number:	200800-3902
Incident Type:	Spill
Incident Date:	07/03/2008
Incident Notes:	07/03/2007 2027 - Received NRC Report stating that a semi truck delivering aluminum at Alcoa Inc. released about 275 gallons of diesel fuel due to a piece of scrap aluminum rupturing one of the diesel fuel saddle tanks. Remedial actions of applying booms and absorbents were completed to contain the release of hazmat. 2028 - Called responsible party, Dale Huddleston, to acquire additional sheen information at which time he gave me the permit number of the location of spill which was outfall #006. MD 2034 - Notified TDEC WPC Alexander of the incident via voice mail. MD2355 Incident closed, further information not needed. JB
Incident Description:	TRACTOR TRAILER WRECK / INCIDENT
Date Received:	07/08/2008
Time Received:	7:32:00 AM
Milemarker:	Not reported
Route:	Not reported

(Continued) **S108321469**

Affected Areas:	Road Surface
Carrier Type:	Not reported
Carrier / Resp Party:	Not reported
Responsible Party Contact:	Alcoa Inc.
Responsible Party Phone:	Not reported
Material:	Diesel
Estimated Amount:	250 to 500 Gallons
Date Closed:	Not reported
Condition of Closure:	Not reported
Closed By:	Not reported
Damages:	False
Fire:	False
Explosion:	False
Evacuation:	False
Exposure:	False
Fishkill:	False
Drinking Water Impacted:	False
ER Guide:	Not reported
Specific Chemical ID Number:	Not reported

State Incident Number:	200800-3940
Incident Type:	Spill
Incident Date:	08/14/2008
Incident Notes:	8/14/2008 0823 NRC report received stating a 1,000 lb Spent Pot Lining spill (K088) had occurred at 0400 EDT at the Alcoa Facility. Spill was on the roadway and was contained and cleaned up, then re-transported to the 90 day storage facility. AR0830 Spoke with Kris Kinder on-site at Alcoa who stated the material is non hazardous and was cleaned up quickly and taken to the storage facility. No other medium other than the roadway was affected and no further assistance will be required. Incident is closed. AR 8/25/08 email from RA: On August 22, 2008, RA talked to Kris Kinder, Alcoa. Mr. Kinder stated that on August 14, 2008, at about 4:00 a.m., an operator taking a load of spent pot lining waste on a fork lift spilled about 1,000 lbs of dry material on the asphalt road inside the plant. He further stated that all material was cleaned up by 5:00 a.m., and no further clean up is required.
Incident Description:	FACILITY INCIDENT / SPILL
Date Received:	08/15/2008
Time Received:	8:25:00 AM
Milemarker:	Not reported
Route:	Not reported
Affected Areas:	Road Surface
Carrier Type:	Not reported
Carrier / Resp Party:	Not reported
Responsible Party Contact:	Alcoa
Responsible Party Phone:	Not reported
Material:	Solid Waste
Estimated Amount:	> 1000 Pounds
Date Closed:	08/25/2008
Condition of Closure:	No Further Action
Closed By:	RA
Damages:	False
Fire:	False
Explosion:	False
Evacuation:	False
Exposure:	False
Fishkill:	False

(Continued) **S108321469**

Drinking Water Impacted:	False
ER Guide:	Not reported
Specific Chemical ID Number:	Not reported
State Incident Number:	200100-834
Incident Type:	Spill
Incident Date:	11/20/2001
Incident Notes:	Referred to water Quality
Incident Description:	TRUCK WRECK / RELEASE / SPILL
Date Received:	11/20/2001
Time Received:	1:02:00 PM
Milemarker:	Not reported
Route:	Not reported
Affected Areas:	Stream
Carrier Type:	Not reported
Carrier / Resp Party:	Not reported
Responsible Party Contact:	Alcoa
Responsible Party Phone:	Not reported
Material:	Oil Products
Estimated Amount:	< 10 Gallons
Date Closed:	11/21/2001
Condition of Closure:	No Further Action
Closed By:	RA
Damages:	False
Fire:	False
Explosion:	False
Evacuation:	False
Exposure:	False
Fishkill:	False
Drinking Water Impacted:	False
ER Guide:	Not reported
Specific Chemical ID Number:	Not reported

G27 **ALUMINUM CO. OF AMER/NORTH PLANT** **LUST** **U004164286**
ENE **2300 NORTH WRIGHT ROAD** **UST** **N/A**
1/4-1/2 **ALCOA, TN 37701**
0.286 mi.
1508 ft. **Site 2 of 2 in cluster G**

Relative:
Lower

Actual:
909 ft.

LUST:

Region:	STATE
Region Number:	2
Facility Id:	2050196
Case Number:	1
Current Status:	8 Case Closed
Product Released:	Not reported
Discovery Date:	01/20/1995
How Discovered:	1 At Closure
Cause:	7 Unknown
Case Manager:	DJM
Case Description:	North Plant Facility, N26
Section:	TECH
Priority:	Not reported
Consultant ID:	c0217-a
Consultant Name:	Ogden Environmental & Energy Ser. Co.
Consultant Contact:	Not reported
Consultant Contact Title:	Not reported
Consultant Contact First Name:	Not reported

ALUMINUM CO. OF AMER/NORTH PLANT (Continued) **U004164286**

Consultant Contact Last Name:	Not reported
Consultant Contact Address2:	Suite 100
Consultant City:	Oak Ridge
Consultant State:	TN
Consultant Telephone:	615-481-8002
Owner ID:	199
Owner Name:	ALUMINUM CO. OF AMER
Owner Contact:	Not reported
Owner Contact Title:	Not reported
Owner Contact First Name:	Not reported
Owner Contact Last Name:	Not reported
Owner Address:	P.O. BOX 9158
Owner City:	ALCOA
Owner State:	TN
Owner Zip Code:	37701
Owner Telephone:	(615) 977-3071

Region:	STATE
Region Number:	2
Facility Id:	2050196
Case Number:	2
Current Status:	8 Case Closed
Product Released:	Not reported
Discovery Date:	06/13/1989
How Discovered:	1 At Closure
Cause:	1 Spill
Case Manager:	DJM
Case Description:	North Plant Facility, N17
Section:	TECH
Priority:	Not reported
Consultant ID:	Not reported
Consultant Name:	Not reported
Consultant Contact:	Not reported
Consultant Contact Title:	Not reported
Consultant Contact First Name:	Not reported
Consultant Contact Last Name:	Not reported
Consultant Contact Address2:	Not reported
Consultant City:	Not reported
Consultant State:	Not reported
Consultant Telephone:	Not reported
Owner ID:	199
Owner Name:	ALUMINUM CO. OF AMER
Owner Contact:	Not reported
Owner Contact Title:	Not reported
Owner Contact First Name:	Not reported
Owner Contact Last Name:	Not reported
Owner Address:	P.O. BOX 9158
Owner City:	ALCOA
Owner State:	TN
Owner Zip Code:	37701
Owner Telephone:	(615) 977-3071

UST:

Facility ID:	2050196
Facility Description:	Industrial
Owner ID:	301383
Owner Name:	John F Rollins

ALUMINUM CO. OF AMER/NORTH PLANT (Continued) **U004164286**

Owner Address:	Aluminum Company of
Owner Address 2:	South Plant S-34, 300
Owner City,St,Zip:	Alcoa, TN 37701
Owner Description:	Private
Tank ID:	17
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	350
Substance Description:	Hazardous Substance
Date Installed:	04/18/1956
Date Last Used:	01/25/1990
Date Closed:	01/25/1990
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	False
Pipe Mat Desc:	Unknown
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported
Tank ID:	16

ALUMINUM CO. OF AMER/NORTH PLANT (Continued) **U004164286**

Tank Status:	**Permanently Out of Use**
Compartment Capacity:	500
Substance Description:	Used Oil
Date Installed:	04/18/1966
Date Last Used:	07/01/1990
Date Closed:	12/21/1990
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Unknown
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	18
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	2000
Substance Description:	Gasoline
Date Installed:	04/18/1966
Date Last Used:	09/08/1990
Date Closed:	12/06/1991

ALUMINUM CO. OF AMER/NORTH PLANT (Continued) **U004164286**

Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Unknown
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	24
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	2000
Substance Description:	Gasoline
Date Installed:	01/02/1900
Date Last Used:	01/04/1988
Date Closed:	09/01/1994
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Concrete
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False

ALUMINUM CO. OF AMER/NORTH PLANT (Continued) **U004164286**

Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	False
Pipe Mat Desc:	Unknown
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	True
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	26
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	2000
Substance Description:	Mixture
Date Installed:	01/02/1900
Date Last Used:	08/10/1994
Date Closed:	09/07/1994
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Concrete
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False

ALUMINUM CO. OF AMER/NORTH PLANT (Continued) **U004164286**

Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Other
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	4
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	3000
Substance Description:	Diesel
Date Installed:	04/18/1946
Date Last Used:	03/01/1991
Date Closed:	05/31/1991
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False

ALUMINUM CO. OF AMER/NORTH PLANT (Continued) **U004164286**

Tank No Fee:	True
Pipe Mat Desc:	Unknown
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	15
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	4000
Substance Description:	Gasoline
Date Installed:	04/18/1966
Date Last Used:	01/01/1989
Date Closed:	12/21/1990
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Unknown
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported

ALUMINUM CO. OF AMER/NORTH PLANT (Continued) **U004164286**

Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	2
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	8000
Substance Description:	Other
Date Installed:	04/18/1966
Date Last Used:	12/21/1977
Date Closed:	12/21/1991
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	False
Pipe Mat Desc:	Unknown
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False

ALUMINUM CO. OF AMER/NORTH PLANT (Continued) **U004164286**

Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	22
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	9000
Substance Description:	Kerosene
Date Installed:	04/18/1946
Date Last Used:	12/01/1988
Date Closed:	12/01/1988
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Unknown
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported

ALUMINUM CO. OF AMER/NORTH PLANT (Continued) **U004164286**

Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	5
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	10000
Substance Description:	Gasoline
Date Installed:	04/18/1946
Date Last Used:	07/01/1990
Date Closed:	12/21/1990
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Unknown
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

ALUMINUM CO. OF AMER/NORTH PLANT (Continued) **U004164286**

Tank ID:	6
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	10000
Substance Description:	Gasoline
Date Installed:	04/18/1946
Date Last Used:	07/01/1989
Date Closed:	12/21/1990
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Unknown
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	7
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	10000
Substance Description:	Kerosene
Date Installed:	04/18/1946
Date Last Used:	12/30/1988

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Date Closed:	12/30/1988
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Unknown
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	8
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	10000
Substance Description:	Kerosene
Date Installed:	04/18/1946
Date Last Used:	12/30/1988
Date Closed:	12/30/1988
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported

ALUMINUM CO. OF AMER/NORTH PLANT (Continued) **U004164286**

Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Unknown
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	9
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	10000
Substance Description:	Kerosene
Date Installed:	04/18/1946
Date Last Used:	12/30/1988
Date Closed:	12/30/1988
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False

ALUMINUM CO. OF AMER/NORTH PLANT (Continued) **U004164286**

Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Unknown
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	10
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	10000
Substance Description:	Kerosene
Date Installed:	04/18/1946
Date Last Used:	12/01/1988
Date Closed:	12/01/1988
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True

ALUMINUM CO. OF AMER/NORTH PLANT (Continued) **U004164286**

Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Unknown
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	11
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	10000
Substance Description:	Kerosene
Date Installed:	04/18/1946
Date Last Used:	12/01/1988
Date Closed:	12/01/1988
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Unknown
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False

ALUMINUM CO. OF AMER/NORTH PLANT (Continued) **U004164286**

Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	3
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	10000
Substance Description:	Used Oil
Date Installed:	04/18/1966
Date Last Used:	12/21/1977
Date Closed:	12/21/1991
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Unknown
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False

ALUMINUM CO. OF AMER/NORTH PLANT (Continued) **U004164286**

Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	12
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	10000
Substance Description:	Used Oil
Date Installed:	04/18/1946
Date Last Used:	12/31/1980
Date Closed:	12/01/1988
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Unknown
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported

ALUMINUM CO. OF AMER/NORTH PLANT (Continued) **U004164286**

Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	19
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	15000
Substance Description:	Kerosene
Date Installed:	04/18/1946
Date Last Used:	12/01/1988
Date Closed:	12/01/1988
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Unknown
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported

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Year Flex Piping Installed:	Not reported

Tank ID:	20
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	15000
Substance Description:	Kerosene
Date Installed:	04/18/1946
Date Last Used:	12/01/1988
Date Closed:	12/01/1988
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Unknown
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	21
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	15000

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Substance Description:	Kerosene
Date Installed:	04/18/1946
Date Last Used:	12/01/1988
Date Closed:	12/01/1988
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Unknown
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	13
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	20000
Substance Description:	Not Listed
Date Installed:	04/18/1966
Date Last Used:	12/31/1980
Date Closed:	12/01/1988
Regulated:	Regulated
Compartment ID:	A

ALUMINUM CO. OF AMER/NORTH PLANT (Continued) **U004164286**

Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Unknown
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	23
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	999999
Substance Description:	Diesel
Date Installed:	01/02/1900
Date Last Used:	12/21/1990
Date Closed:	12/21/1990
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False

ALUMINUM CO. OF AMER/NORTH PLANT (Continued) **U004164286**

Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Unknown
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	1
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	999999
Substance Description:	Not Listed
Date Installed:	04/18/1966
Date Last Used:	12/31/1980
Date Closed:	06/29/1990
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False

ALUMINUM CO. OF AMER/NORTH PLANT (Continued) **U004164286**

Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Unknown
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	14
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	999999
Substance Description:	Not Listed
Date Installed:	04/18/1976
Date Last Used:	12/31/1975
Date Closed:	Not reported
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Unknown

ALUMINUM CO. OF AMER/NORTH PLANT (Continued) **U004164286**

Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

H28 **EZ FOOD STOP MART #12** **LUST** **U003608083**
NE **2768 AIRPORT HIGHWAY** **LUST TRUST** **N/A**
1/4-1/2 **ALCOA, TN 37701** **UST**
0.332 mi. **HIST UST**
1751 ft. **Site 1 of 3 in cluster H**

Relative: **Lower**

Actual: **932 ft.**

LUST:

Region:	STATE
Region Number:	2
Facility Id:	2050063
Case Number:	1
Current Status:	8 Case Closed
Product Released:	Not reported
Discovery Date:	02/01/1988
How Discovered:	3 On-site Impact
Cause:	7 Unknown
Case Manager:	EWC
Case Description:	Not reported
Section:	FO
Priority:	Low
Consultant ID:	c0105
Consultant Name:	Applied Earth Sciences, Inc.
Consultant Contact:	Frank A. DeLuca
Consultant Contact Title:	Not reported
Consultant Contact First Name:	Not reported
Consultant Contact Last Name:	Not reported
Consultant Contact Address2:	Not reported
Consultant City:	Bartlett
Consultant State:	TN
Consultant Telephone:	901-373-5441
Owner ID:	1232
Owner Name:	CALLOWAY OIL COMPANY
Owner Contact:	Not reported
Owner Contact Title:	Not reported
Owner Contact First Name:	Not reported

EZ FOOD STOP MART #12 (Continued) **U003608083**

Owner Contact Last Name: Not reported
Owner Address: 2128 E BROADWAY
Owner City: MARYVILLE
Owner State: TN
Owner Zip Code: 37802 6618
Owner Telephone: (615) 982-3266

LUST TRUST:
Facility Id: 2050063
Case Number: 1
Application Num: 99209
Tank Owner: EXXON COMPANY USA
Owner Id: 14555
Deductible: $75,000.00
Applied Requested: Not reported
Applied Not Eligible: Not reported
Applied Net Pay: Not reported
Applied Deductible: Not reported
Applied Payment: Not reported
Total Requested: $367,419.69
Total Not Eligible: $4,299.31
Total Paid: $288,120.38
Total Net Pay: $363,120.38
Case Status: **CLOSED**

UST:
Facility ID: 2050063
Facility Description: Gas Station
Owner ID: 300766
Owner Name: Calloway Oil Company
Owner Address: P.O. Box 6618
Owner Address 2: Not reported
Owner City,St,Zip: Maryville, TN 37802
Owner Description: Commercial

Tank ID: 1
Tank Status: **Permanently Out of Use**
Compartment Capacity: 550
Substance Description: Used Oil
Date Installed: 03/05/1964
Date Last Used: 05/20/1988
Date Closed: 05/20/1988
Regulated: Regulated
Compartment ID: A
Tank Mat Desc: Cathodically Protected Steel-StiP3
Tank Mods Desc: None
Tank Other Material: Not reported
Tank Manual Gauge: False
Tank Tightness: False
Tank Inventory Control: False
Tank ATG: False
Tank Vapor Monitor: False
Tank GW Monitor: False
Tank Interstitial Dbl Walled: False
Tank Interstitial Second Contain: False
Tank SIR: False

EZ FOOD STOP MART #12 (Continued) **U003608083**

Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Galvanized Steel
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	True
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	9
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	1000
Substance Description:	Used Oil
Date Installed:	05/21/1988
Date Last Used:	11/01/1993
Date Closed:	11/12/1993
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	True
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Galvanized Steel

EZ FOOD STOP MART #12 (Continued) **U003608083**

Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	True
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	2
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	6000
Substance Description:	Gasoline
Date Installed:	03/05/1964
Date Last Used:	05/20/1988
Date Closed:	05/20/1988
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Cathodically Protected Steel-StiP3
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Galvanized Steel
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False

EZ FOOD STOP MART #12 (Continued) **U003608083**

Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	True
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	3
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	6000
Substance Description:	Gasoline
Date Installed:	03/05/1964
Date Last Used:	05/20/1988
Date Closed:	05/20/1988
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Cathodically Protected Steel-StiP3
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Galvanized Steel
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False

EZ FOOD STOP MART #12 (Continued) **U003608083**

Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	True
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	4
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	6000
Substance Description:	Gasoline
Date Installed:	03/05/1964
Date Last Used:	05/20/1988
Date Closed:	05/20/1988
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Cathodically Protected Steel-StiP3
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Galvanized Steel
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False

EZ FOOD STOP MART #12 (Continued) **U003608083**

CP Met:	True
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	5
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	6000
Substance Description:	Gasoline
Date Installed:	03/05/1964
Date Last Used:	05/20/1988
Date Closed:	05/20/1988
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Cathodically Protected Steel-StiP3
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	True
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Galvanized Steel
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	True
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

EZ FOOD STOP MART #12 (Continued) **U003608083**

Tank ID:	11
Tank Status:	**Currently In Use**
Compartment Capacity:	6000
Substance Description:	Gasoline
Date Installed:	12/01/1993
Date Last Used:	Not reported
Date Closed:	Not reported
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Composite (Steel w/FRP)
Tank Mods Desc:	Double-Walled
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	True
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Fiberglass Reinforced Plastic
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	True
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Ball Float Valves
Overfill Installed:	True
Spill Installed:	True
CP Met:	True
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	11
Tank Status:	**Currently In Use**
Compartment Capacity:	6000
Substance Description:	Gasoline
Date Installed:	12/01/1993
Date Last Used:	Not reported

EZ FOOD STOP MART #12 (Continued) **U003608083**

Date Closed:	Not reported
Regulated:	Regulated
Compartment ID:	B
Tank Mat Desc:	Composite (Steel w/FRP)
Tank Mods Desc:	Double-Walled
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	True
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Fiberglass Reinforced Plastic
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	True
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Ball Float Valves
Overfill Installed:	True
Spill Installed:	True
CP Met:	True
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	7
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	10000
Substance Description:	Gasoline
Date Installed:	05/21/1988
Date Last Used:	11/01/1993
Date Closed:	11/12/1993
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported

EZ FOOD STOP MART #12 (Continued) **U003608083**

Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	True
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Galvanized Steel
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	True
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	8
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	10000
Substance Description:	Gasoline
Date Installed:	05/21/1988
Date Last Used:	11/01/1993
Date Closed:	11/12/1993
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	True

EZ FOOD STOP MART #12 (Continued) **U003608083**

Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Galvanized Steel
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	True
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	10
Tank Status:	**Currently In Use**
Compartment Capacity:	12000
Substance Description:	Gasoline
Date Installed:	12/01/1993
Date Last Used:	Not reported
Date Closed:	Not reported
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Composite (Steel w/FRP)
Tank Mods Desc:	Double-Walled
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	True
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False

EZ FOOD STOP MART #12 (Continued) **U003608083**

Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Fiberglass Reinforced Plastic
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	True
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Ball Float Valves
Overfill Installed:	True
Spill Installed:	True
CP Met:	True
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	6
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	12000
Substance Description:	Used Oil
Date Installed:	05/21/1988
Date Last Used:	11/01/1993
Date Closed:	11/12/1993
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	True
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Galvanized Steel
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False

EZ FOOD STOP MART #12 (Continued) **U003608083**

Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	True
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

HIST UST:

Facility ID:	2-050063
Facility Description:	Not Listed
Owner ID:	1232
Owner Name:	Calloway Oil Company
Owner Address:	P.O. Box 6618
Owner City,St,Zip:	Maryville, TN 37802
Owner Telephone:	(865) 982-3266
Owner Description:	Commercial
Tank ID:	10
Tank Status:	**Currently in Use**
Tank Capacity:	12000
Tank Contents:	Gasoline
Tank Material:	Composite (Steel w/ FRP)
Tank 2ndary Trait:	Double-Walled
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	True
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	True
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	True
Spill Installed:	True
Cathodic Protection:	True
Date Installed:	12/01/1993
Tank Leak Detection Listed:	False
Pipe Material:	Fiberglass Reinforced Plastic
Pipe Other Material:	Double-Walled
Pipe Type:	Pressurized
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False

EZ FOOD STOP MART #12 (Continued) **U003608083**

Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	False

Tank ID:	7
Tank Status:	**Permanently Out of Use**
Tank Capacity:	10000
Tank Contents:	Gasoline
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	True
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	05/21/1988
Tank Leak Detection Listed:	False
Pipe Material:	Galvanized Steel
Pipe Other Material:	Cathodically Protected
Pipe Type:	Not Listed
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	True
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	False

Tank ID:	2
Tank Status:	**Permanently Out of Use**
Tank Capacity:	6000
Tank Contents:	Gasoline
Tank Material:	Cathodically Protected Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	True

EZ FOOD STOP MART #12 (Continued) **U003608083**

Date Installed:	03/05/1964
Tank Leak Detection Listed:	True
Pipe Material:	Galvanized Steel
Pipe Other Material:	Cathodically Protected
Pipe Type:	Not Listed
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	8
Tank Status:	**Permanently Out of Use**
Tank Capacity:	10000
Tank Contents:	Gasoline
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	True
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	05/21/1988
Tank Leak Detection Listed:	False
Pipe Material:	Galvanized Steel
Pipe Other Material:	Cathodically Protected
Pipe Type:	Not Listed
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	True
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	False

Tank ID:	11
Tank Status:	**Currently in Use**
Tank Capacity:	12000
Tank Contents:	Gasoline
Tank Material:	Composite (Steel w/ FRP)
Tank 2ndary Trait:	Double-Walled
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False

EZ FOOD STOP MART #12 (Continued) **U003608083**

Tank ATG:	True
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	True
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	True
Spill Installed:	True
Cathodic Protection:	True
Date Installed:	12/01/1993
Tank Leak Detection Listed:	False
Pipe Material:	Fiberglass Reinforced Plastic
Pipe Other Material:	Double-Walled
Pipe Type:	Pressurized
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	False

Tank ID:	6
Tank Status:	**Permanently Out of Use**
Tank Capacity:	12000
Tank Contents:	Used Oil
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	True
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	True
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	05/21/1988
Tank Leak Detection Listed:	False
Pipe Material:	Galvanized Steel
Pipe Other Material:	Cathodically Protected
Pipe Type:	Not Listed
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	True
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	False

EZ FOOD STOP MART #12 (Continued) **U003608083**

Tank ID:	3
Tank Status:	**Permanently Out of Use**
Tank Capacity:	6000
Tank Contents:	Gasoline
Tank Material:	Cathodically Protected Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	True
Date Installed:	03/05/1964
Tank Leak Detection Listed:	True
Pipe Material:	Galvanized Steel
Pipe Other Material:	Cathodically Protected
Pipe Type:	Not Listed
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	9
Tank Status:	**Permanently Out of Use**
Tank Capacity:	1000
Tank Contents:	Used Oil
Tank Material:	Asphalt Coated or Bare Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	True
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	False
Date Installed:	05/21/1988
Tank Leak Detection Listed:	False
Pipe Material:	Galvanized Steel
Pipe Other Material:	Cathodically Protected
Pipe Type:	Not Listed
Pipe Auto Line Leak Detect.:	False

EZ FOOD STOP MART #12 (Continued) **U003608083**

Pipe Leak Detection Listed:	True
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	False

Tank ID:	1
Tank Status:	**Permanently Out of Use**
Tank Capacity:	550
Tank Contents:	Used Oil
Tank Material:	Cathodically Protected Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	True
Date Installed:	03/05/1964
Tank Leak Detection Listed:	True
Pipe Material:	Galvanized Steel
Pipe Other Material:	Cathodically Protected
Pipe Type:	Not Listed
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	5
Tank Status:	**Permanently Out of Use**
Tank Capacity:	6000
Tank Contents:	Gasoline
Tank Material:	Cathodically Protected Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False

EZ FOOD STOP MART #12 (Continued) **U003608083**

Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	True
Date Installed:	03/05/1964
Tank Leak Detection Listed:	True
Pipe Material:	Galvanized Steel
Pipe Other Material:	Cathodically Protected
Pipe Type:	Not Listed
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

Tank ID:	4
Tank Status:	**Permanently Out of Use**
Tank Capacity:	6000
Tank Contents:	Gasoline
Tank Material:	Cathodically Protected Steel
Tank 2ndary Trait:	None
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank Groundwater Monitor:	False
Tank Double Walled:	False
Tank 2nd Contained:	False
Tank SIR:	False
Overfill Installed:	False
Spill Installed:	False
Cathodic Protection:	True
Date Installed:	03/05/1964
Tank Leak Detection Listed:	True
Pipe Material:	Galvanized Steel
Pipe Other Material:	Cathodically Protected
Pipe Type:	Not Listed
Pipe Auto Line Leak Detect.:	False
Pipe Leak Detection Listed:	False
Pipe Vapor Monitor:	False
Pipe Groundwater Monitor:	False
Pipe Dbl Walled:	Not reported
Pipe 2nd Contained:	False
Pipe SIR:	False
Pipe Leak Detection Listed:	True

H29 **E/Z STOP FOOD MARKET** **HIST_LUST CO** **S101134943**
NE **2768 AIRPORT HWY** **N/A**
1/4-1/2 **ALCOA, TN 37701**
0.332 mi.
1751 ft. **Site 2 of 3 in cluster H**

Relative:
Lower

Actual:
932 ft.

HIST_LUST CO:

Region:	COLUMBIA
Facility ID:	2-050063
Owner:	EXXON COMPANY USA
Leak ID:	1
Investigator:	STW

H30 **FARRPORT MARKET** **LUST** **U004164307**
NE **2777 ALCOA HIGHWAY** **UST** **N/A**
1/4-1/2 **ALCOA, TN 37701**
0.355 mi.
1875 ft. **Site 3 of 3 in cluster H**

Relative:
Lower

Actual:
929 ft.

LUST:

Region:	STATE
Region Number:	2
Facility Id:	2050250
Case Number:	1
Current Status:	1a Completed Tank Closure
Product Released:	Not reported
Discovery Date:	Not reported
How Discovered:	Not reported
Cause:	Not reported
Case Manager:	ADS
Case Description:	Not reported
Section:	FO
Priority:	Not reported
Consultant ID:	Not reported
Consultant Name:	Not reported
Consultant Contact:	Not reported
Consultant Contact Title:	Not reported
Consultant Contact First Name:	Not reported
Consultant Contact Last Name:	Not reported
Consultant Contact Address2:	Not reported
Consultant City:	Not reported
Consultant State:	Not reported
Consultant Telephone:	Not reported
Owner ID:	2440
Owner Name:	DAVID W. KING/FARRPORT MARKET
Owner Contact:	Not reported
Owner Contact Title:	Not reported
Owner Contact First Name:	Not reported
Owner Contact Last Name:	Not reported
Owner Address:	2777 ALCOA HWY
Owner City:	Alcoa
Owner State:	TN
Owner Zip Code:	37701
Owner Telephone:	(423) 982-8240

UST:

Facility ID:	2050250
Facility Description:	Gas Station
Owner ID:	301490

FARRPORT MARKET (Continued) **U004164307**

Owner Name:	Metopolitan Knoxville Airport Authority
Owner Address:	P.O. box 15600
Owner Address 2:	Not reported
Owner City,St,Zip:	Knoxville, TN 37901
Owner Description:	Private
Tank ID:	1
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	8000
Substance Description:	Gasoline
Date Installed:	06/24/1987
Date Last Used:	03/01/2004
Date Closed:	12/06/2003
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Cathodically Protected Steel-StiP3
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	True
Tank Inventory Control:	True
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Fiberglass Reinforced Plastic
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	True
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	True
Spill Installed:	True
CP Met:	True
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

FARRPORT MARKET (Continued) **U004164307**

Tank ID:	2
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	8000
Substance Description:	Gasoline
Date Installed:	06/24/1987
Date Last Used:	03/01/2002
Date Closed:	12/06/2003
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Composite (Steel w/FRP)
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	True
Tank Inventory Control:	True
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Fiberglass Reinforced Plastic
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	True
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	True
Spill Installed:	True
CP Met:	True
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Tank ID:	3
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	10000
Substance Description:	Gasoline
Date Installed:	11/10/1997
Date Last Used:	03/01/2002

FARRPORT MARKET (Continued) **U004164307**

Date Closed:	12/06/2003
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Cathodically Protected Steel-StiP3
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	True
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False
Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Fiberglass Reinforced Plastic
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	True
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	True
Spill Installed:	True
CP Met:	True
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

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31 **KNOXVILLE AIRPORT HILTON** **LUST U004164329**
SE **2001 ALCOA HIGHWAY** **UST N/A**
1/4-1/2 **ALCOA, TN 37701**
0.381 mi.
2011 ft.

Relative:
Lower

Actual:
939 ft.

LUST:

Region:	STATE
Region Number:	2
Facility Id:	2050298
Case Number:	1
Current Status:	1a Completed Tank Closure
Product Released:	Not reported
Discovery Date:	Not reported

KNOXVILLE AIRPORT HILTON (Continued) **U004164329**

How Discovered:	Not reported
Cause:	Not reported
Case Manager:	EWC
Case Description:	Not reported
Section:	FO
Priority:	Not reported
Consultant ID:	Not reported
Consultant Name:	Not reported
Consultant Contact:	Not reported
Consultant Contact Title:	Not reported
Consultant Contact First Name:	Not reported
Consultant Contact Last Name:	Not reported
Consultant Contact Address2:	Not reported
Consultant City:	Not reported
Consultant State:	Not reported
Consultant Telephone:	Not reported
Owner ID:	13749
Owner Name:	KNOXVILLE AIRPORT HI
Owner Contact:	Not reported
Owner Contact Title:	Not reported
Owner Contact First Name:	Not reported
Owner Contact Last Name:	Not reported
Owner Address:	2001 ALCOA HIGHWAY
Owner City:	ALCOA
Owner State:	TN
Owner Zip Code:	37701
Owner Telephone:	(615) 970-4300

UST:

Facility ID:	2050298
Facility Description:	Other
Owner ID:	301599
Owner Name:	Knoxville Airport Hilton
Owner Address:	2001 Alcoa Highway
Owner Address 2:	Not reported
Owner City,St,Zip:	Alcoa, TN 37701
Owner Description:	Private
Tank ID:	1
Tank Status:	**Permanently Out of Use**
Compartment Capacity:	250
Substance Description:	Diesel
Date Installed:	02/01/1982
Date Last Used:	08/30/1998
Date Closed:	08/31/1998
Regulated:	Regulated
Compartment ID:	A
Tank Mat Desc:	Asphalt Coated or Bare Steel
Tank Mods Desc:	None
Tank Other Material:	Not reported
Tank Manual Gauge:	False
Tank Tightness:	False
Tank Inventory Control:	False
Tank ATG:	False
Tank Vapor Monitor:	False
Tank GW Monitor:	False
Tank Interstitial Dbl Walled:	False

KNOXVILLE AIRPORT HILTON (Continued) **U004164329**

Tank Interstitial Second Contain:	False
Tank SIR:	False
Tank LD Other:	False
Tank LD Deferred:	False
Tank LD Not Listed:	False
Tank Emergen:	False
Tank No Fee:	True
Pipe Mat Desc:	Copper
Pipe Mod Desc:	Not reported
Pipe Other Material:	Not reported
Pipe Repaired:	False
Pipe Type Desc:	Not reported
Pipe Auto Line Leak Detection:	False
Pipe Line Tightness:	False
Pipe Vapor Monitoring:	False
Pipe GW Monitoring:	False
Pipe Interstitial Dbl Walled:	False
Pipe Interstitial Sec Contain:	False
Pipe SIR:	False
Pipe LD Other:	False
Pipe LD Deferred:	False
Pipe LD Not Listed:	False
LD Other Methods:	Not reported
Overfill Type:	Not reported
Overfill Installed:	False
Spill Installed:	False
CP Met:	False
Small Delivery:	False
Flex Piping Type:	Not reported
Year Flex Piping Installed:	Not reported

Count: 39 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
ALCOA	U004148449	MCGHEE TYSON AIRPORT	2030 AIRPORT HOTEL DR	37701	UST
ALCOA	1009788086	AVIS RENT A CAR SYSTEM, INC. - KNO	2020 AIRPORT HOTEL DR	37701	FINDS, UST
ALCOA	1000917097	VERTIFLITE INC	ALCOA HWY	37701	RCRA NonGen / NLR, FINDS
ALCOA	U003608378	TYS RTR	KNOXVILLE AIRPORT	37701	HIST UST
ALCOA	U003608377	TYS ASR	KNOXVILLE AIRPORT	37701	HIST UST
ALCOA	U003608371	BUI ALS	KNOXVILLE AIRPORT	37701	HIST UST
ALCOA	U004162317	TYS ASR	KNOXVILLE AIRPORT	37701	UST
ALCOA	U004162318	TYS RTR	KNOXVILLE AIRPORT	37701	UST
ALCOA	U004162311	BUI ALS	KNOXVILLE AIRPORT	37701	UST
ALCOA	U003608372	NEW FA ATCT	MCGEE TYSON AIRPORT	37701	HIST UST
ALCOA	U004162312	NEW FA ATCT	MCGEE TYSON AIRPORT	37701	UST
ALCOA	S107459809	METRO KNOXVILLE AIRPORT AUTH.	MCGHEE TYSON AIRPORT	37701	LUST
ALCOA	S107459808	DELTA AIRLINES INC.	MCGHEE TYSON AIRPORT	37701	LUST
ALCOA	U003609997	DELTA AIRLINES INC.	MCGHEE TYSON AIRPORT	37701	HIST UST
ALCOA	U003609983	MURPHY SURF-AIR(PREV.KNOX AIR)	MCGHEE TYSON AIRPORT	37701	HIST UST
ALCOA	S109376301	HERTZ RENT A CAR	MCGHEE TYSON AIRPORT SERVICE C	37701	LUST
ALCOA	S107459645	NEW FA ATCT	MCGHEE TYSON AIRPORT	37701	LUST
ALCOA	S107459807	NATIONAL CAR RENTAL	MCGHEE TYSON AIRPORT	37701	LUST
ALCOA	S107459797	HERTZ RENT-A-CAR	MCGHEE TYSON AIRPORT SER CTR	37701	LUST
ALCOA	U004164234	MURPHY SURF-AIR(PREV.KNOX AIR)	MCGHEE TYSON AIRPORT	37701	UST
ALCOA	U004164249	DELTA AIRLINES INC.	MCGHEE TYSON AIRPORT	37701	UST
ALCOA	S111806335	MCGHEE TYSON AIRPORT - ALCOA	USHY 129	37701	NPDES
ALCOA	1003868550	ALCOA/POWDER & PIGMENT LDFLS	USHY 129 OFF	37701	CERC-NFRAP
LOUISVILLE	U003609999	MENTOR MARKET AND DELI	RT 3	37777	HIST UST
LOUISVILLE	U004164251	MENTOR MARKET AND DELI	RT 3	37777	UST
LOUISVILLE	U003609985	LAKESIDE BAIT AND TACKLE	RT 4	37777	HIST UST
LOUISVILLE	S107459792	HACKNEY FOOD SERVICE	RT 4	37777	LUST
LOUISVILLE	U004164236	LAKESIDE BAIT AND TACKLE	RT 4	37777	UST
LOUISVILLE	U003611457	BLOUNT KNOX TRACTOR	RT 5	37777	HIST UST
LOUISVILLE	U004164305	BLOUNT KNOX TRACTOR	RT 5	37777	UST
LOUISVILLE	U003609936	AIRBASE MARKET	AIRBASE RD	37777	HIST UST
LOUISVILLE	U004164176	AIRBASE MARKET	AIRBASE RD	37777	UST
LOUISVILLE	S107459804	LAKEVIEW MARKET AMOCO	ALCOA HWY	37777	LUST
LOUISVILLE	U003609965	FIBERGLASS CONCEPTS	ALCOA HWY	37777	HIST UST
LOUISVILLE	U004164214	FIBERGLASS CONCEPTS	40 ALCOA HWY	37777	UST
LOUISVILLE	1001493923	FEDERAL AVIATION ADMINISTRATION-AI	FAA & TYSON MCGHEE AIRPORT	37777	RCRA NonGen / NLR, FINDS
LOUISVILLE	1006840058	MCGHEE TYSON AIR NATIONAL GUARD BA	MCGHEE TYSON ANG BASE		FINDS
LOUISVILLE	U001312794	CHARLES R. HICKS	OLD TOPSIDE RD	37777	HIST UST
LOUISVILLE	U004164195	CHARLES R. HICKS	OLD TOPSIDE RD	37777	UST

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 05/09/2013
Date Made Active in Reports: 07/10/2013
Number of Days to Update: 62

Source: EPA
Telephone: N/A
Last EDR Contact: 07/12/2013
Next Scheduled EDR Contact: 10/21/2013
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 05/09/2013
Date Made Active in Reports: 07/10/2013
Number of Days to Update: 62

Source: EPA
Telephone: N/A
Last EDR Contact: 07/12/2013
Next Scheduled EDR Contact: 10/21/2013
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 05/09/2013
Date Made Active in Reports: 07/10/2013
Number of Days to Update: 62

Source: EPA
Telephone: N/A
Last EDR Contact: 07/12/2013
Next Scheduled EDR Contact: 10/21/2013
Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 05/29/2013
Date Made Active in Reports: 08/09/2013
Number of Days to Update: 72

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 09/13/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 10/09/2012
Date Made Active in Reports: 12/20/2012
Number of Days to Update: 72

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 07/08/2013
Next Scheduled EDR Contact: 10/21/2013
Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 05/29/2013
Date Made Active in Reports: 08/09/2013
Number of Days to Update: 72

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 09/13/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 07/11/2013
Date Data Arrived at EDR: 08/08/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 36

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 08/08/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 07/11/2013
Date Data Arrived at EDR: 08/08/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 08/08/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 07/11/2013
Date Data Arrived at EDR: 08/08/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 08/08/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 07/11/2013
Date Data Arrived at EDR: 08/08/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 08/08/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 07/11/2013
Date Data Arrived at EDR: 08/08/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 08/08/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 03/14/2013
Date Data Arrived at EDR: 03/29/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/10/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 03/14/2013
Date Data Arrived at EDR: 03/29/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/10/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 08/15/2013
Next Scheduled EDR Contact: 09/02/2013
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 01/17/2013
Date Made Active in Reports: 02/15/2013
Number of Days to Update: 29

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 07/01/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Annually

State- and tribal - equivalent NPL

SHWS: Promulgated Sites

"Inactive hazardous substance sites that constitute an imminent, substantial danger" is an inactive hazardous substance site where there is a threat of danger to the public health, safety, or environment which is both real and presently existing. Such situations may include, but are not limited to one or more of the following: an immediate action is necessary to minimize an ongoing threat to the public health or pollution of the environment, an inactive hazardous substance site where there is an active release, where direct access to the hazardous substance is not controlled, or where incompatible hazardous substances are found in close proximity. Also known as Promulgated Sites List.

Date of Government Version: 08/07/2012
Date Data Arrived at EDR: 01/09/2013
Date Made Active in Reports: 02/06/2013
Number of Days to Update: 28

Source: Department of Environment & Conservation
Telephone: 615-532-0900
Last EDR Contact: 07/03/2013
Next Scheduled EDR Contact: 10/21/2013
Data Release Frequency: Semi-Annually

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Solid Waste Disposal Facilities

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 03/22/2013
Date Data Arrived at EDR: 03/22/2013
Date Made Active in Reports: 04/15/2013
Number of Days to Update: 24

Source: Department of Environment and Conservation
Telephone: 615-532-0804
Last EDR Contact: 09/19/2013
Next Scheduled EDR Contact: 12/30/2013
Data Release Frequency: Annually

State and tribal leaking storage tank lists

LUST: Fund Eligible Leaking Underground Storage Tank Sites

A listing of leaking underground storage tank site locations.

Date of Government Version: 07/02/2013
Date Data Arrived at EDR: 08/22/2013
Date Made Active in Reports: 09/19/2013
Number of Days to Update: 28

Source: Department of Environment and Conservation
Telephone: 615-532-0945
Last EDR Contact: 08/22/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Quarterly

LUST TRUST: LUST TRUST Fund Database

This list contains information on sites that had accidental releases of petroleum and are eligible for reimbursement from the TN Petroleum UST Fund.

Date of Government Version: 01/03/2013
Date Data Arrived at EDR: 02/21/2013
Date Made Active in Reports: 04/15/2013
Number of Days to Update: 53

Source: Department of Environment & Conservation
Telephone: 615-532-0971
Last EDR Contact: 08/22/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Varies

HIST_LUST CO: Leaking Underground Storage Tanks Sites

A listing of leaking underground storage tank site locations from the Columbia Field Office. The listing is no longer updated.

Date of Government Version: 10/18/1994
Date Data Arrived at EDR: 10/24/1994
Date Made Active in Reports: 12/30/1994
Number of Days to Update: 67

Source: Department of Environmental Conservation, Columbia Field Office
Telephone: 931-380-3371
Last EDR Contact: 06/29/2009
Next Scheduled EDR Contact: 09/28/2009
Data Release Frequency: No Update Planned

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 02/05/2013
Date Data Arrived at EDR: 02/06/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 65

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Quarterly

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 08/27/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 49

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Quarterly

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 02/06/2013
Date Data Arrived at EDR: 02/08/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 63
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Semi-Annually

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 03/01/2013
Date Data Arrived at EDR: 03/01/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 42
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Quarterly

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 09/28/2012
Date Data Arrived at EDR: 11/01/2012
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 162
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/02/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 09/12/2011
Date Data Arrived at EDR: 09/13/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 59
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 02/28/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 43
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

State and tribal registered storage tank lists

UST: Facility and Tank Report
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 06/18/2013
Date Data Arrived at EDR: 06/20/2013
Date Made Active in Reports: 08/19/2013
Number of Days to Update: 60
Source: Department of Environment and Conservation
Telephone: 615-532-0945
Last EDR Contact: 08/22/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Quarterly

AST: Aboveground Storage Tanks
Registered Aboveground Storage Tanks.

Date of Government Version: 10/01/1999
Date Data Arrived at EDR: 10/12/1999
Date Made Active in Reports: 11/05/1999
Number of Days to Update: 24

Source: Department of Environment and Conservation
Telephone: 615-532-0965
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: No Update Planned

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 05/10/2011
Date Data Arrived at EDR: 05/11/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 34

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 08/02/2012
Date Data Arrived at EDR: 08/03/2012
Date Made Active in Reports: 11/05/2012
Number of Days to Update: 94

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 02/06/2013
Date Data Arrived at EDR: 02/08/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 63

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 09/28/2012
Date Data Arrived at EDR: 11/07/2012
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 156

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/02/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 02/28/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 43

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 02/05/2013
Date Data Arrived at EDR: 02/06/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 65

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 02/21/2013
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 45

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 08/27/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 49

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Quarterly

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 07/19/2013
Next Scheduled EDR Contact: 10/28/2013
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

ENG CONTROLS: Engineering Control Sites

Sites that have engineering controls.

Date of Government Version: 03/26/2013
Date Data Arrived at EDR: 05/24/2013
Date Made Active in Reports: 06/04/2013
Number of Days to Update: 11

Source: Department of Environment & Conservation
Telephone: 615-532-0900
Last EDR Contact: 08/15/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Varies

INST CONTROL: Institutional Control Sites

Sites that have institutional controls.

Date of Government Version: 03/26/2013
Date Data Arrived at EDR: 05/24/2013
Date Made Active in Reports: 06/04/2013
Number of Days to Update: 11

Source: Department of Environment & Conservation
Telephone: 615-532-0900
Last EDR Contact: 08/15/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

VCP: Voluntary Cleanup, Oversight and Assistance Program Sites

The Voluntary Cleanup Oversight and Assistance Program (VOAP) offers people the opportunity to work proactively with state government to address necessary cleanup of a property to return it to productive use. In return for their efforts, participants can receive a No Further Action letter and a release of liability for areas where investigation and cleanup is conducted. The program is open to everyone with an interest in addressing contamination at a site.

Date of Government Version: 07/03/2013
Date Data Arrived at EDR: 07/29/2013
Date Made Active in Reports: 07/30/2013
Number of Days to Update: 1

Source: Department of Environmental & Conservation
Telephone: 615-532-0912
Last EDR Contact: 07/03/2013
Next Scheduled EDR Contact: 10/21/2013
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 09/28/2012
Date Data Arrived at EDR: 10/02/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 14

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 07/02/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Varies

SRP: State Remediation Program List

The State Remediation Program (SRP) was established in 1994 within the Division of Solid Waste Management for the purpose of providing owners, prospective purchasers and other interested parties the means to voluntarily investigate, clean up or monitor contaminated sites not regulated under RCRA, CERCLA or the Tennessee Division of Underground Tanks (UST).

Date of Government Version: 08/01/2013
Date Data Arrived at EDR: 08/08/2013
Date Made Active in Reports: 09/19/2013
Number of Days to Update: 42

Source: Department of Environemtn & Conservation
Telephone: 615-532-0853
Last EDR Contact: 08/01/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Superfund VOAP Listing

Brownfields sites included on the Superfund Voluntary Cleanup, Oversight & Assistance Program listing.

Date of Government Version: 07/03/2013
Date Data Arrived at EDR: 07/29/2013
Date Made Active in Reports: 07/30/2013
Number of Days to Update: 1

Source: Department of Environment & Conservation
Telephone: 615-532-0912
Last EDR Contact: 07/03/2013
Next Scheduled EDR Contact: 10/21/2013
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/24/2013
Date Data Arrived at EDR: 06/25/2013
Date Made Active in Reports: 08/09/2013
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 08/05/2013
Next Scheduled EDR Contact: 10/07/2013
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/26/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SWRCY: Recycling Facilities Listing
A listing of recycling facility locations.

Date of Government Version: 03/26/2013
Date Data Arrived at EDR: 03/29/2013
Date Made Active in Reports: 04/15/2013
Number of Days to Update: 17

Source: Department of Environment & Conservation
Telephone: 615-532-8657
Last EDR Contact: 08/01/2013
Next Scheduled EDR Contact: 10/28/2013
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 07/31/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 03/04/2013
Date Data Arrived at EDR: 03/12/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 59

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 09/04/2013
Next Scheduled EDR Contact: 12/16/2013
Data Release Frequency: Quarterly

DEL SHWS: Deleted State Hazardous Waste Sites
A listing of sites removed from the Promulgated Sites Listing.

Date of Government Version: 08/07/2012
Date Data Arrived at EDR: 01/09/2013
Date Made Active in Reports: 02/06/2013
Number of Days to Update: 28
Source: Department of Environment & Conservation
Telephone: 615-532-0900
Last EDR Contact: 07/03/2013
Next Scheduled EDR Contact: 10/21/2013
Data Release Frequency: Varies

PRIORITY CLEANERS: DCERP Remediation Sites Listing
Drycleaner Environmental Response Program remediation sites.

Date of Government Version: 02/04/2013
Date Data Arrived at EDR: 02/07/2013
Date Made Active in Reports: 02/20/2013
Number of Days to Update: 13
Source: Department of Environment & Conservation
Telephone: 615-253-3876
Last EDR Contact: 07/18/2013
Next Scheduled EDR Contact: 11/04/2013
Data Release Frequency: Varies

CDL: Registry of Contaminated Properties
Pursuant to TCA 68212509 the following properties have been quarantined because of methamphetamine production, but have not been cleaned and certified within the 60day time frame allotted by the statute. These properties are hereby registered by the Tennessee Department of Environment and Conservation as unremediated methamphetamine sites. This is not a comprehensive list of quarantined properties. These are properties that TDEC has been notified as being quarantined, but have not been cleaned within the 60 day grace period. Other properties where methamphetamine production residues are a concern may not have been quarantined, may not have been reported to TDEC, or may not have passed the 60day grace

Date of Government Version: 05/01/2013
Date Data Arrived at EDR: 05/09/2013
Date Made Active in Reports: 06/04/2013
Number of Days to Update: 26
Source: Department of Environment & Conservation
Telephone: 615-532-0900
Last EDR Contact: 09/18/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Varies

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/01/2007
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 131
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

Local Lists of Registered Storage Tanks

HIST UST: Underground Storage Tank Database
This database is no longer updated by the agency. It contains records and detail fields that the current UST database does not.

Date of Government Version: 06/18/2013
Date Data Arrived at EDR: 06/20/2013
Date Made Active in Reports: 08/19/2013
Number of Days to Update: 60
Source: Department of Environment & Conservation
Telephone: 615-532-0945
Last EDR Contact: 08/22/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/06/2013
Date Data Arrived at EDR: 04/25/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

LIENS: Liens Information

A listing of sites with environmental liens information.

Date of Government Version: 04/08/2013
Date Data Arrived at EDR: 04/11/2013
Date Made Active in Reports: 05/17/2013
Number of Days to Update: 36

Source: Department of Environment & Conservation
Telephone: 615-532-0900
Last EDR Contact: 07/03/2013
Next Scheduled EDR Contact: 10/21/2013
Data Release Frequency: Varies

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 55

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 07/01/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Annually

SPILLS: State Spills

A listing of spills locations.

Date of Government Version: 07/19/2013
Date Data Arrived at EDR: 07/19/2013
Date Made Active in Reports: 08/20/2013
Number of Days to Update: 32

Source: Department of Environment & Conservation
Telephone: 615-532-0109
Last EDR Contact: 07/18/2013
Next Scheduled EDR Contact: 10/21/2013
Data Release Frequency: Varies

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 07/11/2013
Date Data Arrived at EDR: 08/08/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 08/08/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 08/05/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/19/2013
Next Scheduled EDR Contact: 10/28/2013
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 03/13/2013
Number of Days to Update: 15

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 09/10/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 01/15/2013
Date Made Active in Reports: 03/13/2013
Number of Days to Update: 57

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 06/25/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 12/18/2012
Date Data Arrived at EDR: 03/13/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 30

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/13/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Varies

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/05/2013
Date Data Arrived at EDR: 04/18/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 22

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 09/05/2013
Next Scheduled EDR Contact: 12/16/2013
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/31/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 44

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/30/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 64

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 06/25/2013
Next Scheduled EDR Contact: 10/07/2013
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/22/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/22/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77
Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 07/20/2011
Date Data Arrived at EDR: 11/10/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 61
Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 07/01/2013
Next Scheduled EDR Contact: 10/28/2013
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 11/01/2012
Date Data Arrived at EDR: 01/16/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 114
Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/17/2013
Next Scheduled EDR Contact: 10/28/2013
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 03/14/2013
Date Data Arrived at EDR: 03/20/2013
Date Made Active in Reports: 07/10/2013
Number of Days to Update: 112
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 09/10/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 04/09/2013
Date Data Arrived at EDR: 04/11/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 29
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 07/12/2013
Next Scheduled EDR Contact: 10/21/2013
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 03/08/2013
Date Data Arrived at EDR: 03/21/2013
Date Made Active in Reports: 07/10/2013
Number of Days to Update: 111

Source: EPA
Telephone: (404) 562-9900
Last EDR Contact: 09/11/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 05/08/2012
Date Data Arrived at EDR: 05/25/2012
Date Made Active in Reports: 07/10/2012
Number of Days to Update: 46

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 04/19/2013
Number of Days to Update: 52

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 08/26/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Biennially

DRYCLEANERS: Registered Facilities List

A list of all active registered drycleaner facilities, There may be some inactive facilities included.

Date of Government Version: 05/02/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 08/18/2011
Number of Days to Update: 13

Source: Dept. of Environment & Conservation
Telephone: 615-532-0900
Last EDR Contact: 04/26/2013
Next Scheduled EDR Contact: 08/05/2013
Data Release Frequency: Annually

NPDES: Permitted Facility Listing
A listing of permitted wastewater facilities.

Date of Government Version: 05/28/2013
Date Data Arrived at EDR: 05/29/2013
Date Made Active in Reports: 06/13/2013
Number of Days to Update: 15
Source: Department of Environment & Conservation
Telephone: 615-253-2245
Last EDR Contact: 08/23/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Varies

AIRS: Listing of Permitted Sources
A listing of permitted sources issued by the Division of Air Pollution Control.

Date of Government Version: 03/18/2013
Date Data Arrived at EDR: 03/21/2013
Date Made Active in Reports: 05/14/2013
Number of Days to Update: 54
Source: Department of Environment & Conservation
Telephone: 615-532-0545
Last EDR Contact: 09/06/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations
This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34
Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 07/19/2013
Next Scheduled EDR Contact: 10/28/2013
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing
The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54
Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 08/01/2013
Next Scheduled EDR Contact: 11/04/2013
Data Release Frequency: Varies

US AIRS MINOR: Air Facility System Data
A listing of minor source facilities.

Date of Government Version: 01/23/2013
Date Data Arrived at EDR: 01/30/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 100
Source: EPA
Telephone: 202-564-5962
Last EDR Contact: 06/25/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Annually

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 04/15/2013
Date Data Arrived at EDR: 07/03/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 72
Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 07/03/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Quarterly

FEDLAND: Federal and Indian Lands
Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 07/19/2013
Next Scheduled EDR Contact: 10/28/2013
Data Release Frequency: N/A

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 01/23/2013
Date Data Arrived at EDR: 01/30/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-5962
Last EDR Contact: 06/25/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Annually

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 01/29/2013
Date Data Arrived at EDR: 02/14/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 07/03/2013
Next Scheduled EDR Contact: 10/21/2013
Data Release Frequency: Varies

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 11/11/2011
Date Data Arrived at EDR: 05/18/2012
Date Made Active in Reports: 05/25/2012
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 08/16/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 08/17/2010
Date Data Arrived at EDR: 01/03/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 77

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 09/13/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Varies

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 06/30/2013
Date Data Arrived at EDR: 08/13/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 31
Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Quarterly

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 03/04/2013
Date Data Arrived at EDR: 03/15/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 56
Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 08/23/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Quarterly

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 08/02/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

COAL ASH DOE: Sleam-Electric Plan Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 07/19/2013
Next Scheduled EDR Contact: 10/28/2013
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A
Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR US Hist Auto Stat: EDR Exclusive Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A	Source: EDR, Inc.
Date Data Arrived at EDR: N/A	Telephone: N/A
Date Made Active in Reports: N/A	Last EDR Contact: N/A
Number of Days to Update: N/A	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

EDR US Hist Cleaners: EDR Exclusive Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A	Source: EDR, Inc.
Date Data Arrived at EDR: N/A	Telephone: N/A
Date Made Active in Reports: N/A	Last EDR Contact: N/A
Number of Days to Update: N/A	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

EDR US Hist Auto Stat: EDR Proprietary Historic Gas Stations - Cole

Date of Government Version: N/A	Source: N/A
Date Data Arrived at EDR: N/A	Telephone: N/A
Date Made Active in Reports: N/A	Last EDR Contact: N/A
Number of Days to Update: N/A	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

EDR US Hist Cleaners: EDR Proprietary Historic Dry Cleaners - Cole

Date of Government Version: N/A	Source: N/A
Date Data Arrived at EDR: N/A	Telephone: N/A
Date Made Active in Reports: N/A	Last EDR Contact: N/A
Number of Days to Update: N/A	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 05/20/2013
Date Data Arrived at EDR: 05/21/2013
Date Made Active in Reports: 06/27/2013
Number of Days to Update: 37

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 08/19/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 08/01/2013
Date Data Arrived at EDR: 08/07/2013
Date Made Active in Reports: 09/10/2013
Number of Days to Update: 34

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Annually

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 07/24/2013
Date Made Active in Reports: 08/19/2013
Number of Days to Update: 26

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 07/18/2013
Next Scheduled EDR Contact: 11/04/2013
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 06/21/2013
Date Made Active in Reports: 08/05/2013
Number of Days to Update: 45

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/23/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Annually

VT MANIFEST: Hazardous Waste Manifest Data

Hazardous waste manifest information.

Date of Government Version: 03/26/2013
Date Data Arrived at EDR: 05/24/2013
Date Made Active in Reports: 07/22/2013
Number of Days to Update: 59

Source: Department of Environmental Conservation
Telephone: 802-241-3443
Last EDR Contact: 07/18/2013
Next Scheduled EDR Contact: 11/04/2013
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/19/2012
Date Made Active in Reports: 09/27/2012
Number of Days to Update: 70

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 09/16/2013
Next Scheduled EDR Contact: 12/30/2013
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: Rextag Strategies Corp.
Telephone: (281) 769-2247
U.S. Electric Transmission and Power Plants Systems Digital GIS Data

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Child Care Listing
Source: Department Of Human Services
Telephone: 615-313-4778

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory
Source: Tennessee Spatial Data Server
Telephone: 931-528-6481

Tennesee Lust TDEC: In 1998 EDR reviewed technical reports, phase II reports and phase II report equivalents held by the Tennessee Department of Environment and Conservation and recorded data on leaking underground storage tanks in Davidson, Knox, and Shelby counties.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

MCGHEE TYSON AIRPORT
2055 ALCOA HIGHWAY
LOUISVILLE, TN 37777

TARGET PROPERTY COORDINATES

Latitude (North):	35.8112 - 35° 48' 40.32''
Longitude (West):	83.9938 - 83° 59' 37.68''
Universal Tranverse Mercator:	Zone 17
UTM X (Meters):	229488.7
UTM Y (Meters):	3966945.5
Elevation:	967 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	35083-G8 MARYVILLE, TN
Most Recent Revision:	1979
West Map:	35084-G1 LOUISVILLE, TN
Most Recent Revision:	1984

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

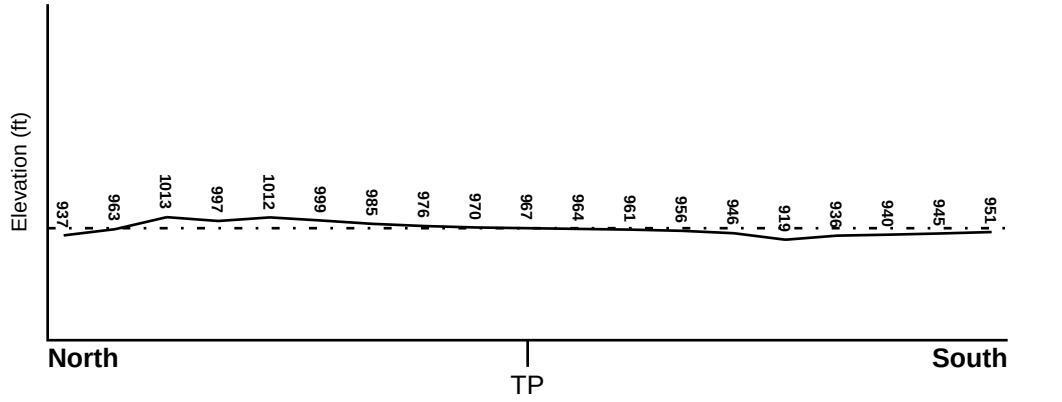
TOPOGRAPHIC INFORMATION

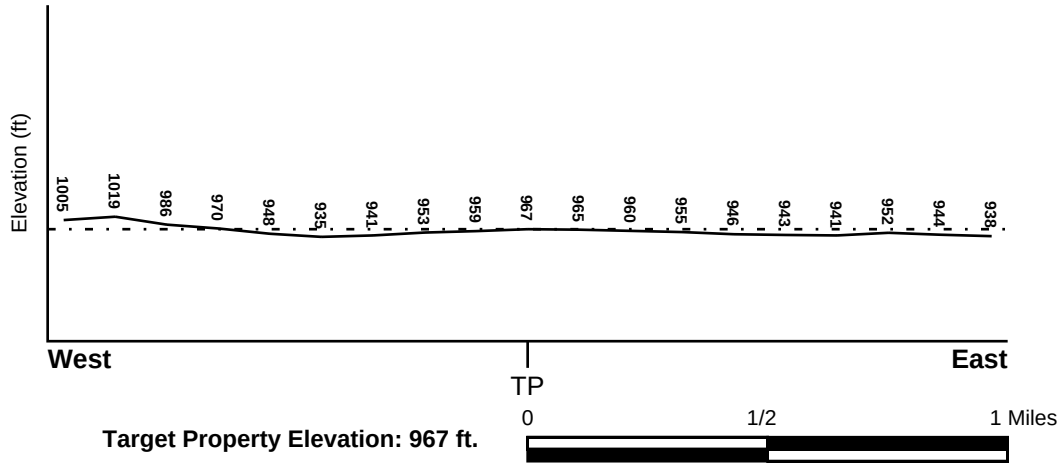
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SSW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 967 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
BLOUNT, TN	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 47009C - FEMA DFIRM Flood data

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
MARYVILLE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Paleozoic
System:	Ordovician
Series:	Ordovician
Code:	O *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	DECATUR
Soil Surface Texture:	silt loam
Hydrologic Group:	Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.
Soil Drainage Class:	Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: HIGH

Depth to Bedrock Min: > 60 inches

Depth to Bedrock Max: > 60 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 2.00 Min: 0.60	Max: 6.00 Min: 4.50
2	7 inches	20 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 2.00 Min: 0.60	Max: 6.00 Min: 4.50
3	20 inches	72 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 2.00 Min: 0.60	Max: 6.00 Min: 4.50

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: cherty - silt loam
silty clay loam
loam

Surficial Soil Types: cherty - silt loam
silty clay loam
loam

Shallow Soil Types: No Other Soil Types

Deeper Soil Types: silty clay loam
cherty - clay
silt loam
unweathered bedrock
clay loam
cherty - silt loam

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

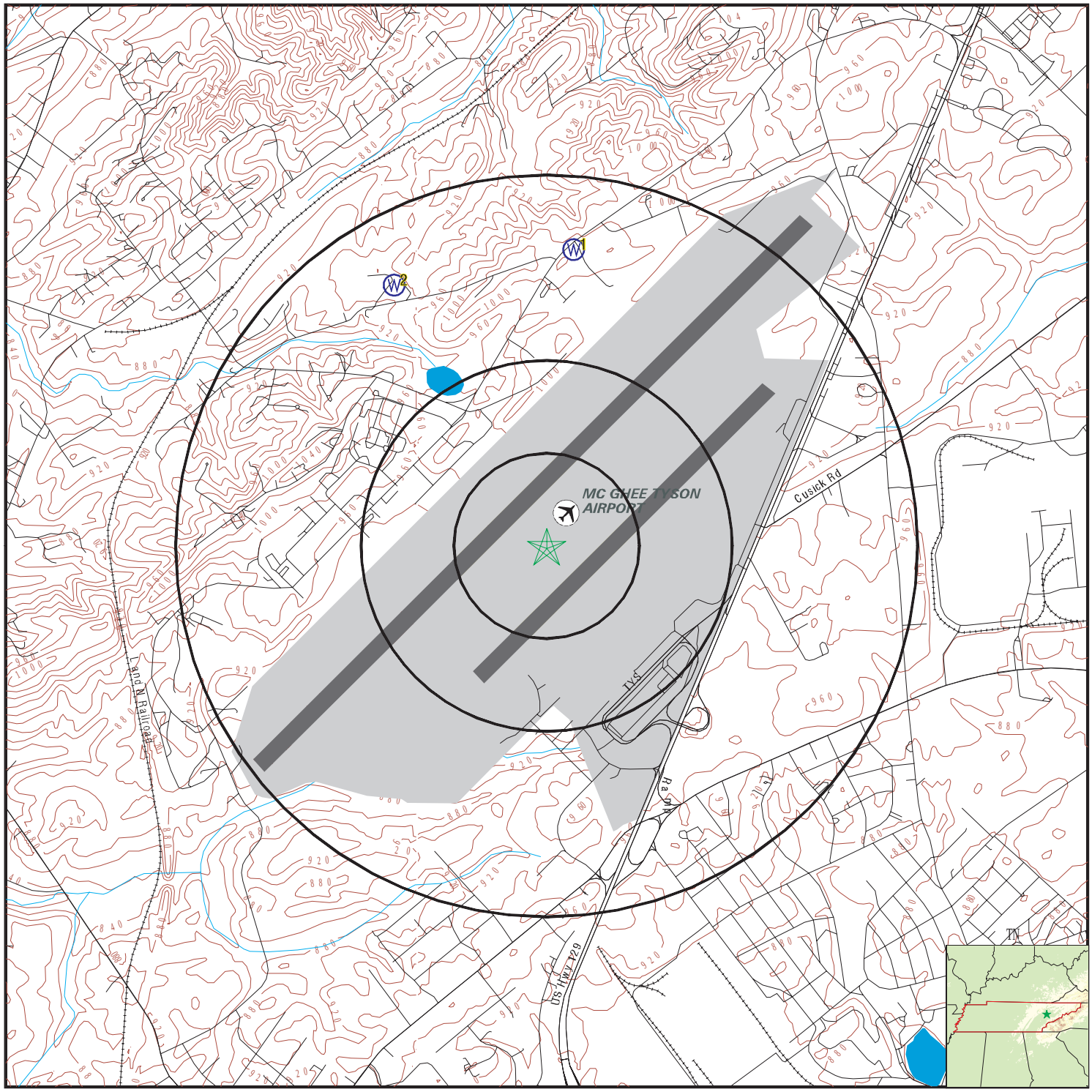
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	TN5000000019290	1/2 - 1 Mile North
2	TN5000000019246	1/2 - 1 Mile NNW

PHYSICAL SETTING SOURCE MAP - 3733572.1s



0 1/4 1/2 1 Miles

- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location

SITE NAME:	Mcghee Tyson Airport	CLIENT:	Michael Baker Jr. Inc
ADDRESS:	2055 Alcoa Highway Louisville TN 37777	CONTACT:	Laura Stevens
		INQUIRY #:	3733572.1s
LAT/LONG:	35.8112 / 83.9938	DATE:	September 19, 2013 4:33 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
1 **North** **1/2 - 1 Mile** **Higher**	**TN WELLS**	**TN5000000019290**

County nam:	BLOUNT	Well numbr:	20080675
Owner name:	TN ARMY NATIONAL GUARD	Addr line1:	AIRBASE RD
License co:	Not Reported	Cmpltn dat:	05/25/07 12:00:00 A
Latitude:	354922	Cmpltn tot:	Not Reported
Cmpltn est:	Not Reported	Quad numbr:	0147SW4
Driller ta:	GEO805	Longitude:	835933
Accuracy:	Not Reported	Casing fee:	Not Reported
Wbz:	Not Reported	Descriptio:	Not Reported
Site id:	TN5000000019290		

	Database	EDR ID Number
2 **NNW** **1/2 - 1 Mile** **Lower**	**TN WELLS**	**TN5000000019246**

County nam:	BLOUNT	Well numbr:	20074206
Owner name:	DAUGHERTY, RICHARD	Addr line1:	2252 CALLAHAN RD
License co:	Not Reported	Cmpltn dat:	09/13/07 12:00:00 A
Latitude:	354917	Cmpltn tot:	Not Reported
Cmpltn est:	Not Reported	Quad numbr:	0147SW4
Driller ta:	D0083065	Longitude:	840004
Accuracy:	Not Reported	Casing fee:	Not Reported
Wbz:	Not Reported	Descriptio:	Farm
Site id:	TN5000000019246		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: TN Radon

Radon Test Results

County	Total Sites	Avg	Max	<4 pCi/L	4-10 pCi/L	10-20 pCi/L	20-50 pCi/L	50-100 pCi/L	>100 pCi/L
BLOUNT	40	5.2	27.4	19	17	3	1	0	0

Federal EPA Radon Zone for BLOUNT County: 1

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 37777

Number of sites tested: 1

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	Not Reported	Not Reported	Not Reported	Not Reported
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	4.800 pCi/L	0%	100%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory
Source: Tennessee Spatial Data Server
Telephone: 931-528-6481

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

County Water Wells in Tennessee
Source: Department of Environment and Conservation
Telephone: 615-532-0191
Water well locations in the following counties - Anderson, Blount, Bradley, Coffee, Cumberland, Davidson, Dickson, Hamilton, Hamblen, Jefferson, Knox, Loudon, Montgomery, Maury, Madison, Putman, Robertson, Rutherford, Shelby, Sevier, Sumner, Sullivan, Washington, Wilson, Williamson.

OTHER STATE DATABASE INFORMATION

RADON

State Database: TN Radon
Source: Department of Environment & Conservation
Telephone: 615-299-9725
Radon Test Results

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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Appendix F

Select Pages from 2010 SPCC/SWPPP Report

TABLE III-2
Chemical Storage and Release Potential Inventory

Location Panel No.	Tenant or Location	Chemical/Material	Chemical Description*	Hazard Class**	Container Type	Max. Storage Capacity gallons (lbs)	Secondary Containment Type	Sec. Cont. Dimensions w x l x h (ft)	Sec. Cont. Volume Gallons	Release Potential	Likelihood of Contact with Storm Water	Drainage to which outfall?	Quantity Exposed in Last 3 Years	Past Significant Spill or Leak
4	Alamo-National Car Rental	Gasoline	L	A, FH	Stationary Steel Tank UST	12,000	None	NA	NA	Low	Low	Outfall 2	None	None
4	Alamo-National Car Rental	New Motor Oil	L	A, FH	Stationary Steel Tank AST	250	Yes	7.5 x 13.5 x 0.583	441	Low	Low	Outfall 2	None	None
4	Alamo-National Car Rental	Used Motor Oil	L	A, FH	Stationary Steel Tank AST	250	Yes	7.5 x 13.5 x 0.583	441	Low	Low	Outfall 2	None	None
4	Alamo-National Car Rental	Windshield Washer (methyl alcohol)	L	A	55 gallon drum	165	Yes	7.5 x 13.5 x 0.583	441	Low	Low	Outfall 2	None	None
4	Alamo-National Car Rental	Assorted Auto Cleaning Chemicals	L	A	1 to 15-gallon containers	65	Yes	7.5 x 13.5 x 0.583	441	Low	Low	Outfall 2	None	None
4	American	Glycol Based Deicing Solution	L	A, FH	Mobile Tanker Truck	750	NA	NA	NA	Low	Medium	Outfall 2	None	None
NA	Augusta Sod & Turf	Herbicides	L	A	55-gallon Drum	55	Inside Bldg.	NA	NA	Low	Medium	Outfall 3	None	None
4	Avis/Budget Rent-A-Car	Gasoline	L	A, FH	Stationary FRP Tank UST	10,000	NA	NA	NA	High	Low	Outfall 2	None	None
4	Avis/Budget Rent-A-Car	Gasoline	L	A, FH	Stationary FRP Tank UST	10,000	NA	NA	NA	High	Low	Outfall 2	None	None
4	ComAir	Glycol Based Deicing Solution	L	A	Mobile Tanker Truck	750	NA	NA	NA	High	High	Outfall 2	None	None
4	Continental (MKAA Deicing Pad)	Glycol Based Deicing Solution	L	A	Plastic AST	2,000	Concrete Pad	NA	NA	Medium	Medium	Outfall 2	None	None
5	Continental Maintenance	Isopropyl Alcohol	L	A, FH	55-gallon drum	110	Secondary Containment Pallet/Inside	NA	NA	Low	Low	Outfall 2	None	None
5	Continental Maintenance	Toluene	L	A, FH	55-gallon Drum	110	Secondary Containment Pallet/Inside	NA	NA	Low	Low	Outfall 2	None	None
5	Continental Maintenance	Skydrol	L	A	55-gallon drum	220	Secondary Containment Pallet/Inside	NA	NA	Low	Low	Outfall 2	None	None
5	Continental Maintenance	Celeste - Cleaner	L	FH	55-gallon	110	Inside Building	NA	NA	Low	Low	Outfall 2	None	None
5	Continental Maintenance	Acetic Acid	L	A, FH	55-gallon	110	Inside Building	NA	NA	Low	Low	Outfall 2	None	None
5	Continental Maintenance	Phosphoric Acid	L	A, FH	5-gallon	5	Inside Building	NA	NA	Low	Low	Outfall 2	None	None
5	Continental Maintenance	Purogene (water preserver)	L	A, FH	30-gallon	30	Inside Building	NA	NA	Low	Low	Outfall 2	None	None
5	Continental Maintenance	New and Used Oil	L	A, FH	55-gallon drums	275	Secondary Containment Pallet/Inside	NA	NA	Low	Low	Outfall 2	None	None

* L = Liquid, S = Solid, G = Gas, A = Acute Health Hazard, FH = Fire Hazard (Ignitable), R = Reactive, C = Corrosive, SPR = Sudden Release of Pressure

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5	Continental Maintenance	Waste Paint/Paint Solids	L	A, FH	55-gallon drums	165	Secondary Containment Pallet/Inside	NA	NA	Low	Low	Outfall 2	None	None
5	Continental Maintenance	Jet-A Fuel (Kerosene)	L	A, FH	Mobile Tanker Truck	3,000	Secondary Containment Pad	NA	To Retention Pond	Low	Low	Outfall 2	None	None
5	Continental Maintenance	Diesel	L	A, FH	400-gallon Tank AST	400	Steel	NA	Inside Bldg.	Low	Low	Outfall 2	None	None
5	Continental Maintenance	Aqueous Film Fire Fighting Foam	L	A	4 Stationary Steel Tanks ASTs - 1300 gallons each	5200	Inside Bldg,	NA	NA	Low	Low	Outfall 2	None	None
5	Continental Maintenance	Sumped Jet Fuel	L	A, FH	55-gallon	220	Inside Building	NA	NA	Low	Low	Outfall 2	None	None
5	Continental Maintenance	Speedy Dry	L	A, FH	55-gallon	55	Inside Building	NA	NA	Low	Low	Outfall 2	None	None
4	Delta (MKAA Deicer Pad)	Type I Glycol Based Deicing Solution	L	A	Stationary Polyethylene Tank AST	8,000	Double Wall Tank on Concrete Pad	NA	NA	Medium	Medium	Outfall 2	None	None
4	Delta (MKAA Deicer Pad)	Type IV Glycol Based Deicing Solution	L	A	Stationary Polyethylene Tank AST	6,000	Double Wall Tank on Concrete Pad	NA	NA	Medium	Medium	Outfall 2	None	None
4	Delta	Glycol Based Deicing Solution	L	A, FH	Mobile Tanker Truck	750	NA	NA	NA	Low	Medium	Outfall 2	None	None
4	Enterprise	Gasoline	L	A, FH	Steel Tank AST	5,000	Double Wall Tank on Concrete Pad	NA	NA	Medium	Medium	Outfall 2	None	None
3	FAA	Diesel	L	A, FH	Steel Tank AST	1,000	Double Wall	NA	NA	Low	Low	Outfall 7	None	None
1	FAA	Diesel	L	A, FH	Steel Tank AST	1,000	Double Wall	NA	NA	Low	Low	Outfall 7	None	None
3	FAA	Propane	L	A/FH	Steel Tank AST	1,000	NA	NA	NA	Medium	Medium	Outfall 7	None	None
3	FAA (Tower)	Diesel	L	A, FH	Steel Tank AST	1,000	Double Wall	NA	NA	Low	Low	Outfall 7	None	None
3	FedEx	Type I Propylene Glycol	L	A	Trailer Mounted Steel Tank	2,000	NA	NA	NA	Medium	Medium	Outfall 4	None	None
3	FedEx	Type IV Anti-Icing Fluid	L	A	275-gallonTotes	825	NA	NA	NA	Medium	Medium	Outfall 4	None	None
3	FedEx	Ethylene Glycol (new antifreeze)	L	A	55-gallon Drum	55	NA	NA	NA	Low	Low	Outfall 4	None	None
3	FedEx	Lubricant	L	A	35-gallon Drums	35	Secondary Containment Pallet	NA	> 55	Low	Low	Outfall 4	None	None
3	FedEx	Used Motor Oil	L	A, FH	Steel Tank AST	280	Double Wall	NA	NA	Low	Low	Outfall 4	None	None

* L = Liquid, S = Solid, G = Gas, A = Acute Health Hazard, FH = Fire Hazard (Ignitable), R = Reactive, C = Corrosive, SPR = Sudden Release of Pressure

TABLE III-2
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Location Panel No.	Tenant or Location	Chemical/Material	Chemical Description*	Hazard Class**	Container Type	Max. Storage Capacity gallons (lbs)	Secondary Containment Type	Sec. Cont. Dimensions w x l x h (ft)	Sec. Cont. Volume Gallons	Release Potential	Likelihood of Contact with Storm Water	Drainage to which outfall?	Quantity Exposed in Last 3 Years	Past Significant Spill or Leak
3	FedEx	New Motor Oil	L	A, FH	Steel Tank AST	280	Double Wall	NA	NA	Low	Low	Outfall 4	None	None
3	FedEx	Hydraulic Oil	L	A	55-gallon Drums	165	Secondary Containment Pallet	NA	> 55	Low	Medium	Outfall 4	None	None
3	FedEx	Auto Transmission Fluid	L	A, FH	15-gallon Drum	60	Inside Bldg.	NA	NA	Low	Low	Outfall 4	None	None
3	FedEx	Brake Wash	L	A, FH	pint containers	<5	Inside Bldg.	NA	NA	Low	Low	Outfall 4	None	None
3	FedEx	Oil/Water	L	FH	Underground Concrete OWS	1,000	NA	NA	NA	Low	Low	Sanitary Sewer	None	None
3	FedEx	Propylene Glycol (50% mixture)	L	A	Mobile Truck Steel Tank	1,800	NA	NA	NA	Medium	Medium	Outfall 4	None	None
3	FedEx	Propylene Glycol	L	A	Mobile Truck Steel Tank	1,800	NA	NA	NA	Medium	Medium	Outfall 4	None	None
4	Hertz	Detergent and Washer Fluid	L	A, C	8, 55-gallon Drums	440	Secondary Containment Pallet	NA	NA	Medium	Medium	Outfall 2	None	None
4	Hertz	Gasoline	L	A, FH	Stationary Steel Tank AST	10,000	NA	NA	NA	Low	Low	Outfall 2	None	None
4	Hertz	New Motor Oil	L	A, FH	Lube-Cube Steel AST	500	Double Wall	NA	NA	Low	Low	Outfall 2	None	None
4	Hertz	Used Motor Oil	L	A, FH	Lube-Cube Steel AST	500	Double Wall	NA	NA	Low	Low	Outfall 2	None	None

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4	Hertz	Oil/Water	L	FH	Underground Concrete OWS	1000	NA	NA	NA	Low	Low	Sanitary Sewer	None	None
4	Hilton Hotel	Diesel	L	A, FH	Stationary Steel Day Tank AST	120	Double Wall	NA	NA	Low	Low	Outfall 2	None	None
4	MKAA (Airfield Maintenance Bldg.)	Diesel	L	A, FH	Convault Tank AST	3,000	Double Wall	NA	NA	Low	Low	Outfall 2	None	None
4	MKAA (Airfield Maintenance Bldg.)	Oil/Water	L	A, FH	Concrete OWS	1,000	NA	NA	NA	Low	Low	Sanitary Sewer	None	None
4	MKAA (Airfield Maintenance Bldg.)	Gasoline	L	A, FH	Convault Tank AST	3,000	Double Wall	NA	NA	Low	Low	Outfall 2	None	None
4	MKAA (Airfield Maintenance Bldg.)	Paints	L	A, FH	5-gallon containers	350	NA	NA	NA	Low	Low	Outfall 2	None	None
4	MKAA (Airfield Maintenance Bldg.)	Used Oil	L	A, FH	Steel	250	Double Wall	NA	NA	Low	Low	Outfall 2	None	None
4	MKAA (Airfield Maintenance Bldg.)	Maintenance Fluids (hydraulic oil and motor oil)	L	A, C, FH	5-gallon Drums	80	Inside Building	NA	NA	Medium	Medium	Outfall 2	None	None
4	MKAA (Airfield Maintenance Bldg.)	New Antifreeze	L	A, C, FH	55-gallon drums	110	Inside Building	NA	NA	Low	Low	Outfall 2	None	None
4	MKAA (Airfield Maintenance Bldg.)	Used Antifreeze	L	A, C, FH	55-gallon drums	110	Inside Building	NA	NA	Low	Low	Outfall 2	None	None
4	MKAA (Air Cargo Building)	Oil/Water	L	A, FH	Concrete OWS	500	NA	NA	NA	Low	Low	Sanitary Sewer	None	None
4	MKAA (Air Cargo Building)	Waste Oil	L	A, FH	55-gallon	220	Inside Building on Secondary	Not measured	NA	Medium	Low	Outfall 2	None	None
4	MKAA (Air Cargo Building)	Petroleum Lube Oil/Hydraulic Oil	L	A,C, FH	55-gallon	55	Inside Building	NA	NA	Low	Low	Outfall 2	None	None
4	MKAA (Deicer Pad)	Deicing Fluid	L	A	Stationary Stainless Steel Tank AST	6,000	Concrete Pad	NA	NA	Medium	Medium	Outfall 2	None	None
4	MKAA (Deicer Pad)	Deicing Fluid	L	A	Stationary Stainless Steel Tank AST	6,000	Concrete Pad	NA	NA	Medium	Medium	Outfall 2	None	None
4	MKAA (Deicer Pad)	Deicing Fluid	L	A	Stationary Plastic Tank AST	2,100	Concrete Pad	NA	NA	Medium	Medium	Outfall 2	None	None
4	MKAA (Deicer Pad)	Deicing Fluid	L	A	Mobile Tanker Truck	1,700	Concrete Pad	NA	NA	Medium	Medium	Outfall 2	None	None
4	Facility Number 200 (Old ARFF)	Diesel	L	A, FH	Convault AST	2,000	Double Wall	NA	NA	Low	Low	Outfall 2	None	None
4	MKAA (Airport Rescue and Firefighting Facility)	Aqueous Film Fire Fighting Foam	L	A	4 Fire Trucks *Two trucks will be removed within the next six months	2,000	Inside Bldg.	NA	NA	Low	Low	Outfall 2	None	None

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4	MKAA (Airport Rescue and Firefighting Facility)	Diesel	L	A, FH	Steel AST	2,000	Steel	NA	Na	Low	Low	Outfall 2	None	None
4	MKAA (Airport Rescue and Firefighting Facility)	Diesel	L	A, FH	Stationary Steel Day Tank AST	75	Inside Metal Box	NA	NA	Low	Low	Outfall 2	None	None
4	MKAA (Airport Rescue and Firefighting Facility)	Aqueous Film Fire Fighting Foam	L	A	330-gallon Portable Plastic Totes	990	Inside Bldg,	NA	NA	Low	Low	Outfall 2	None	None
4	MKAA (Airport Rescue and Firefighting Facility)	Aqueous Film Fire Fighting Foam (Purple K)	L	A	5-gallon Plastic	50	Inside Bldg,	NA	NA	Low	Low	Outfall 2	None	None
4	MKAA (Airport Rescue and Firefighting Facility)	Oil/Water	L	A, FH	Concrete OWS	1,000	NA	NA	NA	Low	Low	Drain Field	None	None
5	MKAA (Continental Express)	Diesel	L	A	Convault AST	400	Double Wall	NA	NA	Low	Low	Outfall 2	None	None
3	MKAA (Lighting Vault)	Diesel	L	A, FH	Convault AST	3,000	Double Wall	NA	NA	Low	Low	Outfall 2	None	None
4	MKAA Concourse Building	Water Conditioning Chemical (Tower Aid II)	L	A	55-gallon Plastic Drum	55	Inside Bldg.	NA	NA	Low	Low	Outfall 2	None	None
4	MKAA Concourse Building (Emergency Generator)	Diesel	L	A	UST	5,000	NA	NA	NA	Low	Low	Outfall 2	None	None
4	MKAA Parking Garage Emergency Generator	Diesel Fuel	L	A, FH	Stationary Steel Tank (AST)	275	Inside Bldg.	NA	NA	Low	Low	Outfall 2	None	None
4	MKAA Parking Garage Storage	Hydraulic Oil	L	A, FH	Hydraulic Unit (Elevator)	75	Inside Bldg.	NA	NA	Low	Low	Outfall 2	None	None
4	MKAA Pumphouse	Diesel	L	A	Stationary Steel Tank AST	275	Inside Bldg.	NA	NA	Low	Low	Outfall 2	None	None
4	MKAA Terminal Building	Water Conditioning Chemical (Tower Chlor I2)	L	A	5-gallon Plastic Drum	5	Inside Bldg.	NA	NA	Low	Low	Outfall 2	None	None
4	MKAA Terminal Building	Water Conditioning Chemical (Loop Hib)	L	A	30-gallon Plastic Drum	30	Inside Bldg.	NA	NA	Low	Low	Outfall 2	None	None
4	MKAA Terminal Building	Hydraulic Oil	L	A, FH	2-124 gallon Hydraulic Units (Elevators)	248	Inside Bldg.	NA	NA	Low	Low	Outfall 2	None	None
4	MKAA Terminal Building	Hydraulic Oil	L	A, FH	Hydraulic Unit (Elevator)	164	Inside Bldg.	NA	NA	Low	Low	Outfall 2	None	None
2	Pinnacle Airlines	Aqueous Film Fire-Fighting Foam (AFFF)	L	A	Two 1,150-gallon Steel AST	2,300	Double Wall	NA	NA	Low	Low	Outfall 2	None	None
2	Pinnacle Airlines (MKAA Fire and Rescue owners)	Diesel	L	A, FH	Steel AST	350	Steel	4x5x3	449	Low	Low	Outfall 2	None	None
2	Pinnacle Airlines (MKAA Fire and Rescue owners)	Diesel	L	A, FH	Steel AST	350	Steel	4x5x3	449	Low	Low	Outfall 2	None	None

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2	Pinnacle Airlines (MKAA Fire and Rescue owners)	Diesel	L	A, FH	Steel AST	350	Steel	4x5x3	449	Low	Low	Outfall 2	None	None
4	TAC Air	Propylene Glycol Type 1	L	A	Plastic AST	6,000	NA	NA	NA	High	High	Outfall 1	None	None
4	TAC Air	Jet-A Fuel	L	A	Mobile Tanker Truck	5,000	None	NA	NA	High	High	Outfall 1	None	None
4	TAC Air	Jet-A Fuel	L	A	Mobile Tanker Truck	5,000	None	NA	NA	High	High	Outfall 1	None	None
4	TAC Air	Jet-A Fuel	L	A	Mobile Tanker Truck	5,000	None	NA	NA	High	High	Outfall 1	None	None
4	TAC Air	Jet-A Fuel	L	A, FH	Mobile Tanker Truck	5,000	None	NA	NA	High	High	Outfall 1	None	None
4	TAC Air (South Ramp)	Aviation Gasoline	L	A, FH	Steel AST	3,000	Double Wall	NA	NA	High	High	Outfall 1	None	None
4	TAC Air	Aviation Gasoline (AVGAS)	L	A, FH	Mobile Tanker Truck	1,500	None	NA	NA	High	High	Outfall 1	None	None
4	TAC Air	Actsolv and Astro Detergent	L	A	55-gallon Drums	110	Inside Bldg.	NA	NA	Medium	Medium	Outfall 1	None	None
4	TAC Air	New and Used oil	L	A	55-gal Drums	165	Roof Only	NA	NA	High	High	Outfall 1	None	None
4	TAC Air (Fuel Farm)	Oil/Water	L	FH	Underground Concrete OWS	500	NA	NA	NA	Low	Low	Sanitary Sewer	None	None
4	TAC Air (T-Hanger)	Ethylene Glycol	L	A	4 - 230-gallon Totes	920	NA	NA	NA	Medium	Low	Outfall 2	None	None
4	TAC Air	Propylene glycol	L	A	Mobile Tanker Truck	1,200	NA	NA	NA	High	High	Outfall 1	None	None
4	TAC Air	Propylene glycol and Ethylene Glycol	L	A	Mobile Tanker Truck	1,200	NA	NA	NA	High	High	Outfall 1	None	None
4	TAC Air	Aviation Gasoline (Diesel/MoGasl)	L	A,FH	Mobile Tanker Truck	2,000	2200	NA	NA	Low	Low	Outfall 2	None	None
4	TAC Air	Used Oil	L	A, FH	250-Gallon AST	250	Inside Bldg.	NA	NA	Low	Low	Outfall 2	None	None
4	TAC Air (Fuel Farm)	Jet-A Fuel (Kerosene)	L	A, FH	Stationary Steel Tank UST	30,000	NA	NA	NA	Low	Low	Outfall 1	None	None
4	TAC Air (Fuel Farm)	Jet-A Fuel (Kerosene)	L	A, FH	Stationary Steel Tank UST	30,000	NA	NA	NA	Low	Low	Outfall 1	None	None
4	TAC Air (Fuel Farm)	Jet-A Fuel (Kerosene)	L	A, FH	Stationary Steel Tank UST	30,000	NA	NA	NA	Low	Low	Outfall 1	None	None
4	TAC Air (Fuel Farm)	Diesel	L	A, FH	Stationary Steel Tank UST	30,000	NA	NA	NA	Low	Low	Outfall 1	None	None

* L = Liquid, S = Solid, G = Gas, A = Acute Health Hazard, FH = Fire Hazard (Ignitable), R = Reactive, C = Corrosive, SPR = Sudden Release of Pressure

TABLE III-2
Chemical Storage and Release Potential Inventory

Location Panel No.	Tenant or Location	Chemical/Material	Chemical Description*	Hazard Class**	Container Type	Max. Storage Capacity gallons (lbs)	Secondary Containment Type	Sec. Cont. Dimensions w x l x h (ft)	Sec. Cont. Volume Gallons	Release Potential	Likelihood of Contact with Storm Water	Drainage to which outfall?	Quantity Exposed in Last 3 Years	Past Significant Spill or Leak
4	TAC Air (Fuel Farm)	Avgas	L	A, FH	Stationary Steel Tank UST	30,000	NA	NA	NA	Low	Low	Outfall 1	None	None
4	TAC Air (Fuel Farm)	Jet-A (Kerosene)	L	A, FH	Stationary Steel Tank UST	15,000	NA	NA	NA	Low	Low	Outfall 1	None	None
4	TAC Air (Fuel Farm)	Avgas	L	A, FH	Stationary Steel Tank UST	15,000	NA	NA	NA	Low	Low	Outfall 1	None	None
4	TWA (Deicing Pad)	Glycol Based Deicing Solution	L	A	Mobile Tanker Truck	2,000	Concrete Pad	NA	NA	Medium	Medium	Outfall 2	None	None
4	United Airlines	Glycol Based Deicing Solution	L	A, FH	Mobile Tanker Truck	750	NA	NA	NA	Low	Medium	Outfall 2	None	None
3	United Parcel Service	Propylene Glycol	L	A	Steel Tank AST	3,000	NA	NA	NA	Medium	Medium	Outfall 3	None	None
3	United Parcel Service	Type IV Anti-Icing Fluid	L	A	Two 265-gallon Steel Totes	530	NA	NA	NA	Medium	Medium	Outfall 3	None	None
3	United Parcel Service	Type IV Anti-Icing Fluid	L	A	Mobile Tanker	1,800	NA	NA	NA	Medium	Medium	Outfall 3	None	None
3	United Parcel Service	Automotive Antifreeze	L	A	1-gallon Container	6	NA	NA	NA	Medium	Medium	Outfall 3	None	None
3	United Parcel Service	Used Motor Oil (Filter Recovery)	L	A, FH	55-gallon Drum	55	Inside Bldg. on secondary containment	4x5x1	NA	Medium	Medium	Outfall 3	None	None
3	United Parcel Service	Oil/Water	L	FH	Underground Concrete OWS	1,000	NA	NA	NA	Low	Low	Sanitary Sewer	None	None
3	United Parcel Service	New Oil	L	A, FH	AST	250	NA	NA	NA	Low	Low	Outfall 7	None	None
4	US Airways (MKAA Deicer Pad)	Propylene Glycol	L	A	Plastic Ast	2,000	Concrete Pad	NA	NA	Medium	Medium	Outfall 2	None	None
4	US Airways (MKAA Deicer Pad)	Propylene Glycol	L	A	275-gallon Totes	550	Concrete Pad	NA	NA	Medium	Medium	Outfall 2	None	None
4	US Airways	Glycol Based Deicing Solution	L	A, FH	Mobile Tanker Truck	500	NA	NA	NA	Low	Medium	Outfall 2	None	None

* L = Liquid, S = Solid, G = Gas, A = Acute Health Hazard, FH = Fire Hazard (Ignitable), R = Reactive, C = Corrosive, SPR = Sudden Release of Pressure

Explanation of Table III-2

Hazard Class	Meaning
(R)	Reactive, which includes unstable reactive, organic peroxide, and water reactive chemicals.
(FH)	Fire hazard or a flammable liquid, combustible liquid, pyrophoric, or oxidizer.
(A)	Acute or immediate health hazard, which refers to highly toxic, toxic, irritant, sensitizer, and corrosive and includes other hazardous chemicals with an adverse effect from short-term exposure; oils are considered "acute" due to the toxicity to aquatic life.
(C)	Corrosive, which is used in combination with Code A above to designate highly corrosive material that is also a health hazard.
(D)	Delayed chronic health hazard, including carcinogens and other hazardous chemicals with adverse effects from long-term exposure.
(SPR)	Sudden release of pressure or explosive conditions, e.g., compressed gas.

A judgment on the probability of release potential has been made. Release potential rankings are based upon the likelihood that a material will leave the confines of its containment vessel and enter the environment. The release potential is listed according to the following criteria.

Release Potential	Meaning
Low	No history of releases from the storage vessel. Containment measures exist to control a release and/or prevent it from reaching surface waters; or the material is stored indoors (i.e., garage) where the possibility of contact with surface water would occur only under very extreme circumstances; or contact with surface water would occur during the loading/unloading of drums or a UST.
Medium	No history of releases from the storage vessel. Containment measures to control a release and/or prevent it from reaching surface waters do not exist.
High	Previous history of releases from the storage vessel. Containment measures do not exist to control and/or prevent a release from reaching surface waters.

Table III-3
Electric Transformer Inventory
McGhee Tyson Airport – August 2010

Location	Tenant	Manufacturer/Gallon/Voltage	Meter #
Gate 9 Along fence	TACAir	RTE – 135 gal. 112.5 KVA - 208/120v	70-562-572 2555 on meter
Across VIP Road near Water Tower Lot	Hilton	McGraw Edison – 280 gal. 1000KVA – 480/277v	81 085 387
Gate 5 Water Tower Parking Lot	MKAA	Howard – 149 gal. 75KVA – 480/277v	81 085 390
Gate 5 Glycol Pad	MKAA	Howard – 126 gal. 300KVA – 480/277v	296 16 575-419
Gate 6 Pedestrian Gate ARFF/Water Tower Lot	MKAA	Pauwels – 73 gal. 75KVA – 208/120v	80-660-422 296 3910
Terminal Ramp (close to bldg.)	MKAA (Owner)	General Electric – 530 gal 2000/2240KVA – 480/277v	No meter Q542469
Terminal Ramp (far from bldg.)	MKAA (Owner)	General Electric – 530 gal 2000/2240KVA – 480/277v	No meter Q542469
Northwest Corner KnoxAir Hangar/Terminal	KnoxAir New Taxiway Hangar	Howard Industries – 167 gal 225 KVA – 208/120v	9175-435204-069 No meter
Parking lot at FedEx	FedEx	Howard – 143 gal. 150KVA - 208/120v	95-902-709
Northwest corner parking lot. Between COEX and Callahan Rd.	COEX	General Electric – 365 gal 1000KVA - 480/277v	Meter Siemens 80 660 425
South of entrance driveway	UPS/Airborne Express	Magnet – 173 gal 75KVA – 208/120v	86 240 173 8539
Behind ATCT at edge of parking lot	FAA Tower	McGraw Edison – 162 gal 225KVA – 208/120v	GE meter # 91 431 910
Behind ATCT along security fence behind lighting vault bldg.	MKAA Lighting Vault	Dowzer – 260 gal 300KVA – 480/277v	GE meter # 76 659 196
Cherokee parking lot right side driveway entrance	Cherokee Aviation	General Electric – 120 gal 300KVA – 208/120v	Pad mount No meter
Hertz next to entrance road at fence	Hertz	Westinghouse – 44 gal 75KVA – 208/120v	GE meter 51 081 694
North end Parking Garage	MKAA Parking Garage	Cooper – 235 gal 500KVA – 480/277v	0034UP11K85A (trans. serial #)
Between Gate 8A and Knox Air T-Hangar	TACAir	Ermco – 28 gal 25KVA – 240/120v	
Between Callahan Road and the AFFF tanks	MKAA	Howard – 259 gal 500KVA – 480/277v	
FAA Tower driveway, between Old Mentor Rd and Airbase Road	FAA Tower	Howard – 28 gal 25KVA – 240/120v	
Between Highway 129 and the Fuel Farm	TACAir	25 KVA – 16 gal 1 37 ½ KVA – 18.77 gal	2 pole mount
Airbase Road at Callahan Road	FAA Radio Tower Site	25 KVA – 16 gal	1 pole mount
Callahan Road rental house	MKAA property	15 KVA – 10 gal	1 pole mount
Callahan Road rental house (removed)	MKAA property	15 KVA – 10 gal	1 pole mount
Callahan Road	MKAA property house	15 KVA – 10 gal	1 pole mount
Between access drive and ramp, next to security fence	TACAir	50 KVA – 23.8 gal (3 ea)	3 pole mount
Northeast corner new Cherokee Aviation hangar	TACAir (U.T. Hangar)	25 KVA – 16 gal (3 ea)	3 pole mount 8589-25 on one

Table III-3 (Cont.)
Electric Transformer Inventory
McGhee Tyson Airport – July 2010 (cont.)

Location	Tenant	Manufacturer/Gallon/Voltage	Meter #
Between access driveway and hangar inside AOA	TAC-Air COEX lease hangar	25 KVA – 16 gal (3 ea)	3 pole mount
Along Cargo Road at service centers lot fence	Alamo/National Car Rental and Avis Service Centers	50 KVA – 23.8 gal (3 ea)	3 pole mount #50 on one pole
Cargo Road & Alcoa Hwy	No apparent owner	25 KVA – 16 gal	1 pole mount #25
Along Terminal loop road, between Hwy 129 and Loop road	MKAA/National Safe Skies	10 KVA – 9 gal	1 pole mount #10
Behind airport entrance sign from Alcoa Hwy.	MKAA	25 KVA – 16 gal	1 pole mount
East end 1970 Air Cargo Building	MKAA 1970 Air cargo Building	10 KVA – 9 gal	1 pole mount
Middle 1970 Air Cargo Building Along south parking lot	MKAA 1970 Air Cargo Building	50 KVA – 23.8 gal (3 ea)	3 pole mount
South end 1970 Air Cargo Building parking lot	MKAA Field Maintenance	25 KVA – 16 gal (3 ea)	3 pole mount
Between access road and hangar at AOA fence	TAC-Air North Hangar C	15 KVA – 10 gal	1 pole mount
Wrights Ferry Road at AOA security fence	FAA equipment	50 KVA – 23.8 gal (3 ea)	3 pole mount
Between Hwy 129 and National Safe Skies office southeast corner	MKAA /National Safe Skies	50 KVA – 23.8 gal (3 ea)	3 pole mount
Cherokee Aviation (New Hangar at Rotating Beacon)	TAC-Air Hangar	75 KVA – 160 gal	Pad Mount
Along west fence at Enterprise Rental Car	Enterprise Rental Car	75 KVA Quantity unknown	Pad Mount
Terminal Service Road (west of Hilton Hotel)	MKAA/Hilton Hotel	No label. Quantity unknown	Pad Mount Meter 89-355-065
Airport Hotel Drive (south of Hilton Hotel)	MKAA/Hilton Hotel	75 KVA Quantity unknown	Pad Mount Meter 97-323-476
MKAA Airfield Maintenance Building	MKAA	E 874 120/208 No PCB sticker Quantity unknown	Pad Mount No meter
Tyson Boulevard (behind Administrative offices)	MKAA	C491 277/480 Quantity unknown	Pad Mount Meter 82-404-191
Tyson Boulevard (behind Administrative offices)	MKAA	Serial # 020014 (723176) Quantity unknown	Pad Mount No Meter
MKAA Fire/Rescue Emergency Services	MKAA	No PCB Stickers F331 (150), 108Y/120 Quantity unknown	Pad Mounted Meter 73-729-236
Callahan Road (near 200,000 gallon water ASTs)	MKAA	Siemens 120-480v 60 Hz Quantity unknown	Pad Mounted Meter 80-700-152
Right side drive way next to Clayton Homes	TAC-Air	Siemens 120-480v Quantity unknown	Pad Mounted Meter 80-756-458
Air Cargo Building (south side behind parking lot)	MKAA	120-480v 75 gallon with Non PCB Sticker Quantity unknown	Pad Mounted Meter 96-511-985
Air Cargo Building (along Authorization Personnel Only Road)	MKAA	75 gallon with Non PCB Sticker 277-480v (E2999) Quantity unknown	Pad Mounted No meter
Air Cargo Building (southwest corner along Authorized Personnel Only Road).	MKAA	Serial # 078074 Quantity unknown	S&C Pad Mounted

PLEASE SEE ATTACHED TANG SWPPP MAPS
FOR TANG AREAS WITH MKAA PROPERTY.

CITY OF ALCOA
ELECTRICAL SUBSTATION

EMERGENCY
SPILL KIT

STORM WATER
OUTFALL 2

FAA 1000 GAL DIESEL AST

Could not
field verify

OL/IL 1-33

EW 1-34

HW 1-35

EW 1-36

60"CMP REDUCING STRUCTURE

RIP RAP DITCH

LEGEND

- OVERHEAD ELECTRIC
- OPEN DITCH FLOW
- STORM MANHOLE
- STORM CATCH BASIN
- UNDERGROUND DRAIN
- RIPRAP
- TAXIWAY EDGE LIGHT
- HEADWALL/ENDWALL
- INLET/OUTLET
- OWS OIL/WATER SEPARATOR
- OVERHEAD TRANSFORMER
- TRANSFORMER PAD

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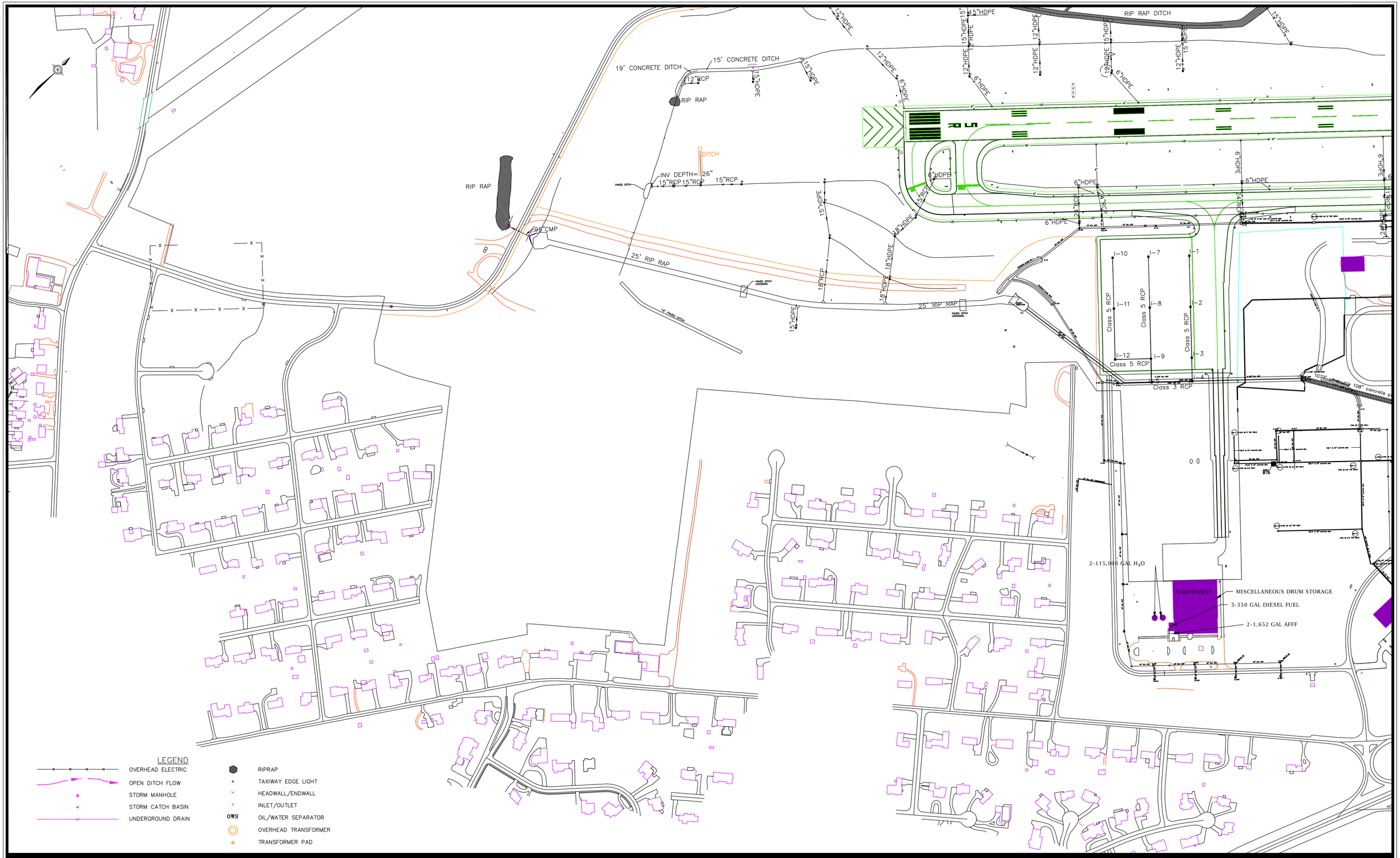
SHEET TITLE
FACILITY LAYOUT
MCGHEE TYSON AIRPORT - PANEL 1

SUBMITTAL 06/18/08
MKAA PROJECT NO.

JOB NO. 0888805623
DATE 06/16/08
FILE NAME PANEL 1
REV. NO. AUGUST 2010
DWG. NO. 9202_B001



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FACILITY LAYOUT
MCGHEE TYSON AIRPORT - PANEL 2

SUBMITTAL
06/18/08

MKAA PROJECT NO.

JOB NO. 0888805623
DATE 05/16/08
FILE NAME PANEL 2
REV. NO. AUGUST 2010
DWG. NO. 9202_B001

STORM WATER OUTFALL 7

STORM WATER OUTFALL 8

STORM WATER OUTFALL 9

STORM WATER OUTFALL 10

STORM WATER OUTFALL 11

PLEASE SEE ATTACHED TANG SWPPP MAPS FOR TANG AREAS WITH MKAA PROPERTY.

FAA 1,000 GAL DIESEL AST

3,000 GAL DIESEL AST

FAA 1000 GAL PROPANE TANK

2,000 GALLON PROPYLENE TANK PROPYLENE TOTE STORAGE

1,800 GALLON PROPYLENE TRUCK

1,800 GAL PROPYLENE TRUCK

280 GAL USED OIL AST
280 GAL NEW OIL AST
(INSIDE)

3000 GAL AST

SPILL RESPONSE EQUIPMENT (INSIDE)

1,000 GAL OWS

500 GAL UST (NOT IN USE)

TO OUTFALL 4

DRAINAGE DIVIDE

Concrete Ditch

13' Concrete Ditch

DITCH

LEGEND

- OVERHEAD ELECTRIC
- OPEN DITCH FLOW
- STORM MANHOLE
- STORM CATCH BASIN
- UNDERGROUND DRAIN
- RIPRAP
- TAXIWAY EDGE LIGHT
- HEADWALL/ENDWALL
- INLET/OUTLET
- OWS OIL/WATER SEPARATOR
- OVERHEAD TRANSFORMER
- TRANSFORMER PAD

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SHEET TITLE
FACILITY LAYOUT
MCGHEE TYSON AIRPORT - PANEL 3

SUBMITTAL 06/18/08
MKAA PROJECT NO.

JOB NO. 0888805623
DATE 06/16/08
FILE NAME PANEL 3
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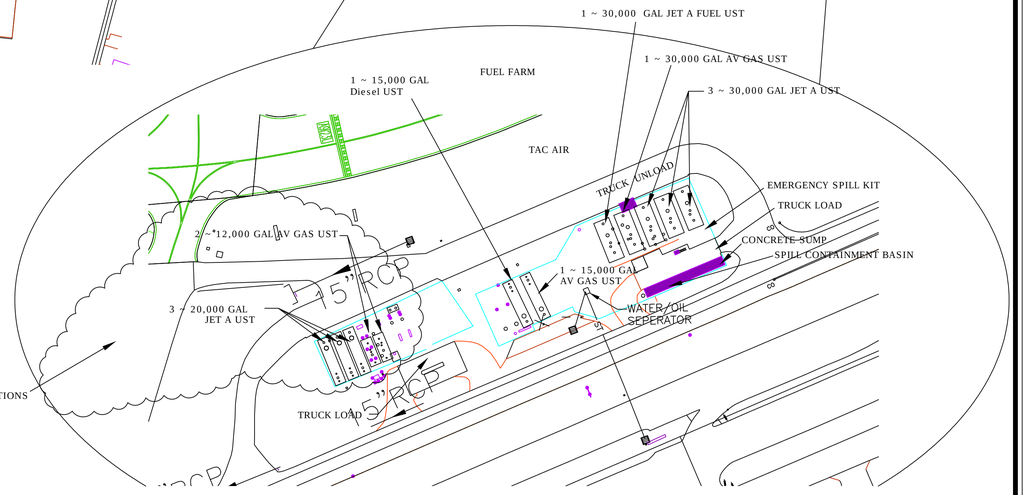
FUEL DISPENSERS
3,000 GAL GASOLINE AST (MKAA)
3,000 GAL DIESEL AST (MKAA)
1,000 GAL OIL/WATER SEPARATOR (MKAA)
6" CONCRETE DITCH
EMERGENCY SPILL KIT
2,000 GAL AST DIESEL
4-500 GAL ~ AFFF TRUCKS
2,000 GAL AFFF AST
250 GALLON USED OIL AST
1,000 GALLON OWS
1970 AIR CARGO CHEMICAL STORAGE BUILDING
MISCELLANEOUS DRUM STORAGE
750 GALLON GLYCOL (AMERICAN) MOBILE TANKER TRUCK
MISC. DRUMS (DELTA)
1,000 GAL OWS
2,000 GAL DIESEL AST (MKAA)
750 GAL GLYCOL (COMAIR) MOBILE TANKER TRUCK
1,700 GALLON GLYCOL (DELTA)
124 GAL HYDRAULIC OIL ELEVATOR
120 GAL DIESEL AST
ding special design catch basin
EMERGENCY SPILL KIT
75 GAL HYDRAULIC OIL AST PARKING ELEVATOR (MKAA)
275 GAL DIESEL AST EMERGENCY GENERATOR (MKAA)
TRANSFORMER
2-10,000 GAL GASOLINE UST
2-250 GAL NEW OIL AST
5,000 GALLON AST
EMERGENCY SPILL KITS
12,000 GAL GASOLINE UST
250 GAL NEW MOTOR OIL AST
250 GAL USED MOTOR OIL AST
DRUMS OF MISC. AUTO CHEMICALS
124 GAL HYDRAULIC OIL FOR ELEVATOR
750 GALLON GLYCOL (UNITED) MOBILE TANKER TRUCK
EMERGENCY SPILL KIT
500 GALLON GLYCOL (US AIR) MOBILE TANKER TRUCK
5,000 GAL DIESEL UST FOR EMERGENCY GENERATOR
164 GAL HYDRAULIC OIL FOR TERMINAL ELEVATOR (MKAA)
GLYCOL TOTE STORAGE
4-275 GAL PROP. GLYCOL AST
4-55 GAL GLYCOL ADDITIVE
1-6,000 GAL PROP. GLYCOL AST (INSIDE)
3,000 GALLON AVGAS AST
300 GAL GASOLINE MOBILE TANKER TRAILER
FRENCH DRAIN
55 GAL. WASTE FUEL
2 ~4,550 GAL JET-A TRUCK
1 ~3,100 GAL JET-A TRUCK
1 ~1,500 GAL AV GAS TRUCK
1 ~2,000 GAL DIESEL TRUCK
1,700 GALLON GLYCOL MOBILE TANKER TRUCK
2-10,000 GAL GASOLINE UST
2-500 GAL MOTOR OIL AST
MISC. GAL DRUMS AUTO CHEMICALS
1000 GAL OWS
MKAA DEICER PAD
6,000 GALLON TYPE IV AST (DELTA)
8,000 GALLON TYPE I AST (DELTA)
2,000 GALLON TYPE I AST (CONTINENTAL)
2,000 GALLON TYPE I AST (US AIR)
6,000 GALLON TYPE 1 AST (MIKAA)
6,000 GALLON TYPE 1 AST (MIKAA)
1 ~ 5,000 GAL ETHYLENE GLYCOL TRUCK
1 ~ 1,500 GAL AV GAS TRUCK
1 ~ 2,800 GAL JET-A TRUCK
1 ~ 2,200 GAL JET-A TRUCK
1 ~ 5,000 GAL JET-A TRUCK
1 ~ 2,500 GAL AUTO GAS TRUCK
1 ~ 1,500 GAL AV GAS TRUCK
EMERGENCY SPILL KIT
500 GAL GLYCOL AST
MISC. DRUM STORAGE
TAC AIR
FUEL FARM SEE 1ST SET
STORM WATER OUTFALL 1
250 GAL OIL AST MISC. DRUMS
PILOT OIL
10,000 GAL GAS AST
OUTFALL 1
OUTFALL 2
CB 7-96
CB 7-97
23 L


1 ~ 30,000 GAL JET A FUEL UST
1 ~ 30,000 GAL AV GAS UST
3 ~ 30,000 GAL JET A UST
FUEL FARM
1 ~ 15,000 GAL Diesel UST
TAC AIR
TRUCK UNLOAD
EMERGENCY SPILL KIT
TRUCK LOAD
CONCRETE SUMP
SPILL CONTAINMENT BASIN
2 ~ 12,000 GAL AV GAS UST
1 ~ 15,000 GAL AV GAS UST
3 ~ 20,000 GAL JET A UST
WATER/OIL SEPERATOR
TRUCK LOAD
OLD TANK FARM
CLOSED ACCORDING TO
STATE OF TENNESSEE REGULATIONS
NOT TO SCALE

LEGEND

- OVERHEAD ELECTRIC
- OPEN DITCH FLOW
- STORM MANHOLE
- STORM CATCH BASIN
- UNDERGROUND DRAIN
- RIPRAP
- TAXIWAY EDGE LIGHT
- HEADWALL/ENDWALL
- INLET/OUTLET
- OWS — OIL/WATER SEPARATOR
- OVERHEAD TRANSFORMER
- TRANSFORMER PAD

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MCGHEE TYSON AIRPORT - PANEL 4

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06/18/08
MKAA PROJECT NO.

JOB NO. 0888805623
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FILE NAME PANEL 4
REV. NO. AUGUST 2010
DWG. NO. 9202_B001

400 GAL DIESEL AST

4 ~ 1,300 GAL AFFF AST

2 ~ 200,000 GAL WATER AST'S

1 ~ 275 GAL DIESEL

MISCELLANEOUS DRUM STORAGE

CONTINENTAL TERMINAL

3,000 GAL JET A MOBILE TANKER

MODULAR CHEMICAL STORAGE BUILDING (Secondary Containment)

8" VENT PIPE INV. = 947.33

EXIST. C.B. TOP=946.94 ± INV. IN =938.62(24") INV. OUT =937.28(36")

APPROXIMATE LOCATION

APPROXIMATE LOCATION

FAA 1,000 GAL DIESEL AST

STORM WATER OUTFALL 4

8' X 6' Box Culvert

23R

LEGEND

- OVERHEAD ELECTRIC
- OPEN DITCH FLOW
- STORM MANHOLE
- STORM CATCH BASIN
- UNDERGROUND DRAIN
- RIPRAP
- TAXIWAY EDGE LIGHT
- HEADWALL/ENDWALL
- INLET/OUTLET
- OWS OIL/WATER SEPARATOR
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SHEET TITLE
FACILITY LAYOUT
MCGHEE TYSON AIRPORT - PANEL 5

SUBMITTAL
06/18/08

MKAA PROJECT NO.

JOB NO. 0888805623
DATE 06/16/08
FILE NAME PANEL 5
REV. NO. AUGUST 2010
DWG. NO. 9202_B001